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**DEVELOPMENT OF
ECONOMIC SOCIETY**

ECONOMICS AND SOCIAL INSTITUTIONS

VOLUME I

Development of Economic Society, Revised

by MODLIN and DEVYVER

VOLUME II

Introduction to Economic Analysis

by McISAAC and SMITH

Essential Economic Principles

by McISAAC and SMITH

VOLUME III

Social Control of Industry

by MODLIN and McISAAC

VOLUME IV

Money, Credit, and Finance, Revised

by LUTHRINGER, CHANDLER, and CLINE

VOLUME V

Population, Resources, and Trade

by DELL and LUTHRINGER

VOLUME VI

Labor and Social Organization

by McCABE and LESTER

ECONOMICS AND SOCIAL INSTITUTIONS

Volume I

DEVELOPMENT
OF
ECONOMIC
SOCIETY

by

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PREFACE

THE present volume is the first in a series of six small volumes, entitled collectively *Economics and Social Institutions*, designed to meet the requirements of an introductory course in economics. The series involves important innovations in format, in point of view, and in content — innovations that are the fruit of the combined experience of the contributors. It represents an effort to solve some of the difficult problems that beset the elementary course in economics.

The format of the series affords obvious advantages of flexibility. In the small-volume form, the series may be kept up to date more easily by revision of each part in the light of experience and changing conditions. The division into parts also permits great flexibility in the arrangement of the introductory course. By the use of the separate volumes in different combinations and sequences the material may readily be adjusted to the varying needs of different courses. Incidentally, each volume is small enough to be slipped conveniently into a coat pocket.

It has been the constant aim of the editor and the contributing authors to present a series highly integrated as a whole in subject matter. At the same time, each of the six volumes is a definite unit in itself. Throughout, the authors have made consistent use of an evolutionary

approach and an analysis based on imperfect markets where that seemed applicable to the specific economic problems examined.

In line with the present trend to introduce the subject of economics by a historical survey, the first volume deals with the *Development of Economic Society* since the Middle Ages. Experience indicates that the student learns most easily by following the evolution of economic organization from simple to more complex forms. By understanding the development of economic institutions, doctrines, and societies, and especially the relations between them, the student is in a better position to view modern economic society, if not with a critical eye, at least with some degree of detachment.

The second volume, *Introduction to Economic Analysis*, develops methods for investigating and analyzing various economic problems such as those treated in the succeeding volumes. The forces determining prices, wages, interest, rent, and profits are examined in terms of imperfect markets and an economy in evolution.

These methods of analysis are applied in Volume III to certain sections of the economic system where some *Social Control of Industry* has appeared to be a desirable adjunct to free private enterprise. Corporation finance and government regulation of security markets, transportation, public utilities, industrial monopoly, agriculture, and marketing are included within the scope of the volume.

The fourth volume, *Money, Credit, and Finance*, presents an analysis of money and prices, banking, and public finance. This combination of material follows

logically from the intimate relationships existing between the present-day monetary system and the agencies for public and private credit.

Volume V, *Population, Resources, and Trade*, begins with an analysis of population trends and the distribution of material resources. An examination of interregional and international trade and commercial policies is then presented, and related to the uneven distribution of population and resources among the various nations of the world.

Under the title, *Labor and Social Organization*, the final volume covers labor organizations, collective bargaining, labor legislation, social security, and proposals for economic and social reform, such as Socialism, Communism, Distributism, and Fascism.

The authors of the series are deeply indebted to many friends and colleagues, especially the instructors in the elementary course at Princeton, for constructive criticisms in the preparation of these books. We also wish to take this opportunity to acknowledge the generous co-operation of those Princeton students who were enrolled in the course during 1936-1937, when this series was used in a preliminary form. Their many suggestions have aided materially in the clarification and improvement of these six volumes.

JAMES G. SMITH

Princeton, N.J.

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**DEVELOPMENT OF
ECONOMIC SOCIETY**

Introduction

EVOLUTIONARY CHARACTER OF ECONOMIC SOCIETY

THE economic system of the present day did not emerge suddenly to meet contemporary needs, but evolved through centuries of change in the structure of social and economic organization. In comparison with the simpler methods by which men provided themselves with goods and services in earlier times, the modern economic system is extremely complex. However, no stage in economic evolution is sharply separated from preceding stages, and, as will be abundantly illustrated in this book, a continuous thread of development may be traced from age to age.

Such a development has occurred in techniques of production, in the forms of economic organization, and in the legal rights and duties that define the social relationships of people to each other. Methods of production have changed according to man's increasing knowledge and skill, the growth of population, and the

discovery of new lands. By tracing the development of these changes from the simpler conditions of the past, the purposes and functioning of the component parts of the contemporary economic system can be better understood. Moreover, an analytical survey of economic history gives a perspective to social and economic development that sharpens perception and encourages impartial judgment concerning present-day economic problems.

Such a survey need not be a comprehensive historical narrative, nor need it begin chronologically earlier than is required to trace the simpler forms of economic organization that are closely related to the existing economic structure. The dominant features of the modern economic system all originated in the Middle Ages or a later period. Indeed, so far as the United States is concerned, England is the direct source of our economic and social heritage, for although some of the prototypes of our institutions of trade, credit, and finance appeared first in Continental Europe, they found their way to America largely through their English adaptations.

A study of economic history affords a clearer insight into the operation of the social and economic forces that have affected the evolution of economic society. Such forces as the voyages of discovery, the growth of population, and the emergence of new ideas caused the simple medieval forms of social and economic institutions to crumble. The subsequent process of transition to newer, more complex patterns progressed at an accelerated pace during the period of nationalism or

mercantilism, spurred on by the rapid expansion of markets and the growth of commerce during the sixteenth and seventeenth centuries. The developments during that era, sometimes spoken of as the Commercial Revolution, set the stage for a period of even more rapid change, commonly referred to as the Industrial Revolution, which began during the eighteenth century.

Out of this revolutionary upheaval the modern economic system surged, with institutions profoundly affected by the crude individualistic philosophy of the late eighteenth and early nineteenth century. The period since then has seen a twofold development in the system that emerged from the Industrial Revolution. The expanding structure of economic organization itself has become more and more complex; and, at the same time, many of its constituent elements have been subjected increasingly to group or social control as the pendulum of thought has swung away from the philosophy of extreme individualism.

NATURE OF ECONOMIC SOCIETY

In speaking of economic society the economist is, of course, isolating for special consideration certain phases of the life of the social group of which every individual is a member. The phases of social activity to which the economist (as contrasted with the anthropologist, sociologist, psychologist, or political scientist) directs his attention are those that are intimately connected with the efforts of people to obtain incomes with which to satisfy their personal desires. In a very simple economic

society, such as existed in primitive times and exists today in pioneer settlements, the ability of the individual to satisfy his needs and desires is largely dependent upon his own capacity to produce the things necessary to minister to those desires.

Under primitive conditions the producer and consumer of a particular good usually are the same person. More and more, however, the production of particular goods has been separated from the consumption of those goods. Consequently, the mechanism of exchange has become of increasing importance. Today, men tend to specialize in the production of those goods or services for which they are best adapted, relying upon the sale of the resulting products for an income with which to buy other goods and services that they need or desire.

The economist is concerned with the complex relationships, organizations, customs, and conditions that surround this process of producing, exchanging, and consuming goods and services. However, his task is more than that of describing these conditions and relationships; he also attempts to analyze the principles that govern the system, and to trace the operation of economic forces. With the growing complexity of the system, the interaction of economic forces has also become more intricate, and dislocations of normal economic relationships in certain sectors of the economic system may have widespread and unfortunate repercussions. Thus, the economist is inspired in his study of the system not only by the urge of scientific curiosity, but also by the hope that greater knowledge may show the way to social and economic changes that will promote the well-being of the members of society.

*SIGNIFICANCE OF ECONOMIC AND
SOCIAL PHILOSOPHY*

The character and operation of economic organization has always been profoundly affected by the contemporary beliefs or social philosophy of the people of the age. Man lives not only in a world of material things but in a world of ideas, and no one can understand the social institutions and organizations of any age without some appreciation of the point of view and the beliefs that dominated the thought of the time. This is clearly exemplified by the successive stages in the development of economic institutions. Without some knowledge of the beliefs during the Middle Ages concerning the place of the Church in temporal affairs, the institutions and customs of that age would be incomprehensible. In like manner, the glorification of private enterprise that accompanied the Industrial Revolution can only be understood in conjunction with the shift in social philosophy to the doctrines of individualism based on natural law.

Thus, the economic life of the modern era embraces within its structure a complicated set of relationships of technology, of organizational forms or institutions, and of modes of thought, most of them having some continuity with the earlier conditions out of which they emerged. Whether one chooses to regard the processes of change as primarily representing successive stages in the progress of man — of evolution from an inferior to a superior level of attainment — depends upon one's own conception of progress. But quite apart from any question of a "progressive trend" in human affairs

toward a "better and better state", the present can best be understood against the background of the past.

PLAN OF THIS VOLUME

This book is divided into four parts, dealing with four chronological stages of institutional development: Part One, The Medieval Economy; Part Two, Economic Nationalism; Part Three, Economic Revolution; and Part Four, Modern Economic Society. Each of the four parts contains a concluding chapter that interprets the contemporary economic system in the light of prevailing ideals and beliefs, although a continuous thread of interpretation is also woven into the chapters on specific institutional topics. In Part Four of the book, the historical record of development since the Industrial Revolution is used as a basis for the analysis of the principal institutions of the present economic system.

It is possible for the student to read consecutively the chapters dealing with specific phases of economic life — agriculture, industry, trade, or finance — in order to obtain a view of the development of particular institutions through the centuries. Consecutive reading of the interpretative chapters on ideals and beliefs, at the end of each of the four parts, will direct attention to man's changing views with respect to the nature of economic forces. However, the arrangement of the book by periods of history reveals, in addition, the co-ordination of parallel developments, enabling the reader to comprehend the evolution of society as a whole from the simple economy of the Middle Ages to the complex economy of the modern era.

PART ONE

MEDIEVAL
ECONOMY

C H A P T E R I

Agriculture

THE period of European history beginning with the breakdown of the Roman Empire in the fifth century and extending to the fifteenth century is usually called the Middle Ages. The earlier date marked the coming of the barbarians to Rome and the disappearance of central governmental control. The period from the fifth to the eleventh century has often been termed the "dark ages", dreary centuries marked by an ignorance that contrasted greatly both with the culture of Rome and Greece and with that of more modern times. From the beginning of the eleventh century, however, there was a progressive development in institutions and knowledge which served as the foundation of the modern era. Though this development was slow in comparison with the rapidity of recent changes, modern civilization owes to the Middle Ages much that could never have been acquired from the ancients.

*ECONOMIC LIFE BEFORE THE
ELEVENTH CENTURY*

England, although one of the more remote outposts of the Roman Empire, was affected by the breakdown of the imperial power. While it had never really enjoyed the benefits of centralized control in the same degree as had Continental provinces, England had acquired Roman towns, roads, and government. The downfall of Roman control in the fifth century was followed in England by a decline toward barbarism. For several centuries the petty Saxon kings and their stronger Danish conquerors fought among themselves for control. In 871, the year Alfred the Great became king of the Saxons, the Danish invaders were dominant; but during the subsequent years of his outstanding reign the power of the Danes was restricted to one small section of the country. When Alfred died in 901 he left a country in which the power of a central government was once more an established fact. As the line of Alfred's successors died out the power of the king again waned; and great earls, owing little to the king, were given control over large groups of shires or counties, exercising over their tenants judicial and fiscal power previously belonging to the central government. During the latter half of the eleventh century William the Conqueror again established a strong central government, which during subsequent centuries gradually developed the United Kingdom.

During the greater part of the centuries before the Norman Conquest in 1066 agriculture and stock raising

were almost the sole occupation of the people. The trade, both internal and external, that had come with the legions of Rome, declined when they departed. Early medieval cities of England, as of Continental Europe, were not so much trading centers as fortified places of defense. Manufacturing was crude, for skill was rare and demand was limited. Most of the inhabitants lived in small self-sufficient agricultural villages. However, the conquering Danish armies of the eighth and ninth centuries were followed by the Danish merchants. With trade came a development of handicrafts, so that the people of later Saxon England, during the years between 850 and 1066, followed somewhat more varied occupations, rather than agriculture alone; and trading cities again began slowly to develop.

Despite the growth of trade caused by the Danes, the people remained dominantly agricultural. The evidence seems to indicate, furthermore, that they were living in a feudal society or manorial system similar to that found throughout Europe at the time, although the manner in which this system evolved in England is still a subject of scholarly investigation. It is now generally believed that the people had long been in a servile position, and that before the Norman Conquest there had been a gradual bettering of this servile status. In any event, for the next several centuries the majority of the people of England lived under the feudal, or manorial, system and made their living principally from agriculture. The manorial system was not so prevalent in the north and west of England, where

the inhabitants lived in scattered homesteads and were engaged primarily in raising sheep and cattle.

The remainder of this chapter will be concerned with agricultural life in England during the centuries from 1066 to about 1450.

THE MANORIAL SYSTEM

The manorial system was an adaptation of living conditions to the needs of a primitive agricultural society. It established a co-operative organization making possible a more productive use of the soil through joint cultivation. Furthermore, the manor provided for a certain amount of division of labor, which was an important factor in a society in which the inadequacy of transportation facilities limited territorial exchange of products. Finally, in countries with little central authority, the manorial system furnished a degree of military protection, again on a co-operative basis.

The manor was a basic part of the feudal system. From his king, the lord of the manor received a grant of land, or manor, in return for military duties and fees. The manorial system provided a method for the cultivation of this land. The lord allowed his serfs the use of some of the land for their own livelihood, and in return these serfs provided the labor to produce the lord's crops. The manor was also a legal unit, for the king granted the power to hold court for the settlement of disputes and the punishment of crimes occurring on the manor. The manorial system, in other words, provided the economic basis of feudal society.

It was the organized way of life of the people under feudalism, and constituted the "economic system" of the time.

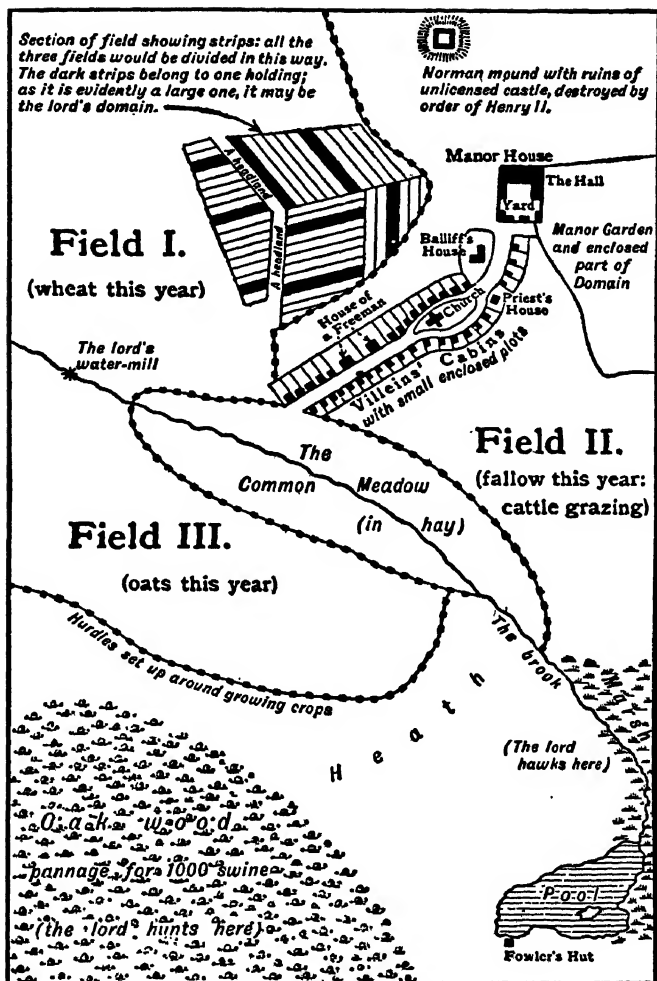
Economic Classes on the Manor. The manor, always owned by a lord who might be a nobleman, a churchman, or the king, was often combined with other manors in different parts of the country to constitute the lord's estate. If the lord were not in residence, he was represented by a bailiff who, as a general manager, exercised the delegated authority of the owner. In addition to the bailiff each manor supported a man called the reeve, who was likely to be one of the local farmers elevated to the position of foreman, or head worker. The part of the land that was held as the private property of the lord for his personal needs was called the domain. It consisted, in part, of many strips of land in the different fields similar to the holdings of the villeins or serfs. In addition the lord held a share in the common land and usually controlled the woodland. The domain was cultivated by the serfs for the lord of the manor under the direction of the bailiff and the reeve.

The free tenants constituted the second class found on the manor. They paid a comparatively fixed rental in money and kind, and in addition performed some "boon work" upon the lord's estate. In 1066 these free tenants constituted about one eighth of the agricultural population of England. The proportionate number of them increased during succeeding years, particularly after the twelfth century. A third class were the serfs—the villeins and cotters. These men farmed the lord's

domain, and in their little spare time were expected to produce enough for themselves and their families on their own small holdings of 'scattered acres. Finally, each manor maintained the services of a few specialists, such as a parish priest and usually a miller, a brewer, and a blacksmith.

The Village. The majority of the manors contained only one village, or vill as it was then called. In the center of this village was usually located the manor house, the home of the lord of the manor or his agent, the bailiff. Seldom was this an imposing house, usually consisting of but one large hall where all the household ate, lived, and slept. Later, as riches increased, private chambers for the master became common.

Near by would be located the village proper, generally consisting of a straggling row of one-room thatched cottages, picturesque enough no doubt, but providing miserable living quarters for the villagers and their livestock. The body warmth of these animals often afforded the only means of tempering the cold of winter. Each village supported a church; and somewhere in the vicinity, along the stream on which the vill was usually located, would be the mill at which all the grain was ground and the cider made. A large section of uncultivated land known as the commons or the common land was situated near the village. Here the stock of all could be pastured. Grazing also occurred on the meadows along the stream, while a tract of woodland supplied satisfactory hunting for the lord. Of most importance was the more or less extensive area of arable land, largely under cultivation,



MAP OF AN IMAGINARY VILLAGE UNDER THE
MANORIAL SYSTEM

Reproduced from Trevelyan's *History of England*, by
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which required the major attention of the inhabitants of the village.

A closer inspection of the arable land would show that it was divided usually into three separate fields, one planted with wheat or some other winter-sown crop, a second with oats, beans, barley, or rye, and a third lying fallow. This division of land for cultivation was the basis of the three-field system of crop rotation, according to which a section would be planted in a different crop for each of two years and during the third would remain fallow in order to regain its fertility. Each large field was again divided into long narrow half-acre strips separated, for convenience in communal cultivation, by balks, or unplowed strips of land. Every villager on the manor had his holdings scattered among the three fields, in units of these half-acre strips, so that he would always have some part of his land in crops. Under this system he was necessarily constrained to follow the customary crop rotation. His freedom of choice was limited in that it was necessary for him to grow a winter-sown crop in one field and a spring-sown crop in the other. He could, however, sow any number of different crops in each field so long as he kept within that rule. Although this method of using land caused much waste of time and space, in such a communal organization it was apparently the most equitable division. The land of the manor was not uniform, and scattered fields gave every tenant a share in each quality of land. Occasionally, when new land was added to the manor, each tenant would receive his proportionate share.

The chief products of the manor were wheat, rye, and barley, which were raised for food and drink. Peas and beans were also grown, together with small quantities of flax and hemp. Root crops such as potatoes and turnips were still unknown, and artificial grasses were not used. The only pasture was that afforded by the natural grasses of the common land and meadows, and by the stubble on the fields after the harvest. In comparison with the present yields, the size of the crops of any of these products was very small. The yield of wheat, for instance, rarely exceeded ten bushels to the acre, as compared with the present English average of thirty bushels.

There was some variety in livestock. Horses were not as extensively used as at present, and when used were commonly harnessed with oxen. One reason for this preference was that only the front feet of an ox had to be shod whereas a horse needed to be shod all around. Since iron was expensive, this was a significant item. Moreover, the crude harness and the unbelievably heavy implements of the time were more suitable for the ox than for the horse. Still another factor was the cost of keeping the animals over the winter. The winter-keep of a horse cost about four times that of an ox. And finally, when too old for work, the horse was valuable only for its hide, whereas the meat of an ox could be used for food.

Cattle were valued for their milk but were seldom fattened for the table. Sheep were of great importance in medieval farming, not so much for their skin or their meat as for their wool. As early as the eleventh

century English wool commanded good prices in Flanders and could be transported comparatively easily over the worst of roads. Hogs were found everywhere, for they foraged for themselves and so cost little to produce. Poultry, raised generally, constituted an important part of the diet of the poorer people; and eggs were usually plentiful.

As a method of farming, the open or three-field system was extremely wasteful. One student of the period has phrased the disadvantages of the system in these words:¹

"The crude agriculture, the wasteful system of fallows, the loss of large tracts of land through bad drainage made the Anglo-Saxon system a very uneconomic one. Further than this, the open field arrangement was very injurious to the best interests of the villeins. The close contiguity of the strips made trespass in ploughing almost unavoidable; the growing grain was open to cattle as well as travelers; cross ploughing was impossible. The science of road-making was in its infancy . . . and the roads in the common-fields and meadows were mere 'ways', which in bad weather became sloughs, rendering trespass upon adjacent lands inevitable. This fact, together with the constant seeding of thistles and weeds upon adjoining strips, destroyed whatever inclination a *gebûr* (farmer) may have had to be prompt, careful and systematic in the cultivation of his numerous scattered acres."

THE MANOR AS AN ECONOMIC UNIT

Each person who lived on the manor was required to spend a varying amount of time in the cultivation

¹ Andrews, C. M., *The Old English Manor* (1892), p. 119

of the domain. Generally speaking, there were three kinds of services that might be rendered by the villagers. First, there was the "week work", which consisted of a number of days' work spent upon the domain each week, the number varying in different seasons. During the busy seasons of plowing and harvesting, so-called "boon work" was expected in addition to the customary week work. Finally, there were special or extra services that the lord had the right to require. These services, established by local custom, were definite tasks and might include specified extra plowing, the harvesting of hay from a certain number of acres, the digging of ditches, or any other agricultural labor. These services might be actually rendered or, in some instances, might be settled by payments of money or kind; that is, in products.

The Income of the Lord of the Manor. The income of the lord of the manor came from several sources. There were, of course, a few crops raised for sale. For such ready money as he needed, the lord depended chiefly upon his livestock and his dairy. Colts, calves, and pigs not needed on the manor were sold in the neighboring towns or villages. Cheese was sold in large amounts, and from an early date wool was one of the staple "cash" products of the manor.

The lord of the manor, however, had other sources of income than that received from the sale of agricultural products. In addition to, or in lieu of, labor services some of the freemen on the manor paid dues in money or in kind for the right to use the land belonging to the lord. The freemen were able to do this be-

cause, having larger landholdings and stock of their own, they were able to produce some crops for market. Sometimes these dues were for the right to use the arable land, sometimes for the right to pasture stock in the wood lot, or for the right to cut wood for building or for fuel. On most of the manors also the mill belonged to the lord, and the villagers were forced to use it. Whether the lord rented it to the miller and received rent for its use, or whether the miller was his servant operating the enterprise for the lord's profit, the income was likely to be considerable. The brewery and even the bakeshop were sometimes monopolies bringing in a certain amount of rent or profit. .

Another large source of revenue was the manor court. The income derived from these courts was an attribute of sovereignty rather than of economic position or ownership. The manor courts were the guardians of the customs of the manor, and the business transacted included both civil and criminal cases. At these courts were paid the fees so prevalent in medieval society. Did a tenant wish to reside outside the manor? Did he wish to send his child to a school or apprentice him to some trade? Did he wish to give his daughter in marriage? Did he wish his son to inherit his property? Then in each case, he must pay a fee to the lord. Had the tenant been careless in his duties at harvest time? Had he been neglectful of the fixed fees for road building? Had the baker given short weight, or the miller adulterated the flour he made? Then he must pay a fine to the lord. Had a resident of the village committed a crime against life or property? Had he poached

on the lord's domain? Here at the manor court he was fined or punished according to the nature of his crime. The court was essential to the maintenance of the economic customs of the manor as well as to the enforcement of justice. Moreover, not only did it afford a source of revenue to the lord, but it was the custodian of the records of ownership and of the rights of the villagers.

The Incomes of the Common People. Politically the status of the free tenant was considerably better than that of the classes beneath him. He was not bound to the land, but could go and come at will; for, if he owned the land in fee simple he could sell it, and if he rented the land he could give up his lease. Nor was he usually responsible for the variety of fees and fines placed upon villeins and cotters, except of course those relating to the enforcement of the common law of justice. The rent paid by the free tenant to the lord for the use of the land was usually termed a quit-rent, since it was in lieu of feudal dues and services. From an economic point of view the free tenant corresponded to the highest type of present-day farmer. He paid a fixed rent or fixed dues rather than a share of his crop. Moreover, he did not have to do week work, although often he had to perform the boon work or hire someone else to do it in his stead. He was a farmer-enterpriser. He rented or owned the land, usually owned his farm implements, hired the help that he needed, sold what products he could, bought the few essentials that he could not produce, and hoped to make a profit from the year's operations.

By far the larger part of the landholders, however, were villeins who "held" land for their own cultivation and made payment for it to the lord of the manor by means of services on his domain. The amount of land held by any one man was determined theoretically by the number of oxen he could contribute to the manorial plow team. All of these villeins were not of the same rank or status in the system. Their position depended largely upon their customary status, upon the amount of the services to be rendered to the lord, and upon the size of their holdings. The smaller the holdings, and the more uncertain the labor services that were required, the lower was the status of the villein. Theoretically and in the eyes of the law, the villeins were bondmen, bound to the land and unable to leave without the permission of the lord. Furthermore, their servile status was symbolized by the fees they were required to pay to the lord when their daughters were married or when their estates were settled. Although the power of the lord over his serfs was supposed to be supreme, customs had grown up that actually hedged that power considerably. For instance, though the serf could not leave the land neither could the lord dispossess him.

The cash income of a member of this group was probably very small indeed. Perhaps the sale of some dairy products or meat would give him a little money, but only in his spare time could the villein work his own land, and no doubt he considered himself fortunate if he could grow enough to support himself

after paying his customary fines and fees to the lord.

At the bottom of the social and economic scale of the manor were the cotters. A cotter would occupy a cottage with a small plot around it, though sometimes he would hold a few acres of the scattered fields and enjoy rights to the common. His obligatory labor for the lord might be considerable in amount, but on the whole it was less than that of the villein because of his small landholding. In his spare time, therefore, the cotter hired himself out for wages to the lord or to the free tenants. Cotters were also employed by more prosperous villeins to perform some of the latter's burdensome duties on the domain.

In addition to the bailiff and the reeve who supervised the work on the manor, and to the villeins and the cotters who furnished the labor for that purpose, there were certain other people in the village; especially craftsmen who did particular jobs, either as servants of the lord or as independent enterprisers. One person ran the mill, another did the brewing, a third tended the livestock, and a priest safeguarded the souls of all of them. Thus, there were the beginnings of a division of labor in those tasks that required unique training, and for which there was a constant need. In addition to receiving payments for their services, this group of specialists usually held a certain amount of the manorial land for their own use and cultivation; for in the case of many of them there was not sufficient demand for their special services to require their full time.

*SELF-SUFFICIENCY AND STABILITY OF
LIFE AND PROPERTY*

The medieval manor was a comparatively self-sufficient economic unit. Geographical specialization in the production of commodities, with exchange among different sections, was greatly limited by transportation difficulties. Each manor grew the wheat to make its own bread, brewed its own beer, fashioned its own rude tools and household utensils, spun and wove its own wool and flax, and lived its own self-contained life with very little intercourse with the outside world.

The existence of towns indicates that there were markets where agricultural products could be sold and supplies could be bought. As previously mentioned, dairy products, cattle, wool, and hides constituted important money crops, which were sold mostly by the lord or his bailiff but sometimes by the free tenants or even the villeins. The chief products required by the village that could not be produced locally were iron, salt, tar, and cloth for the ladies of the manor house. Iron was needed to fashion tools and tips for wooden implements. Salt was of extreme importance in curing the meat that furnished the staple food for four or five months of the year. Tar was used chiefly as a cure for the scab disease that afflicted the sheep.

Custom was the dominant economic force throughout English medieval life. The lords charged the customary rents; the villeins served the customary number of days' work; the miller charged the customary price for his services; all followed the customary crop rota-

tion, working with each other on what amounted to a co-operative farm. This medieval system of agriculture was, in the main, unchanging and unprogressive, and the methods of farming continued to be wasteful because they could not be improved under the system. Methods passed from father to son, and a man born in a particular class could but seldom rise beyond that class.

On the other hand, this stability in itself gave to the individual a certain amount of security unknown in days of rapid change. Though his standard of living was low in comparison to that of an agricultural laborer today, and though poor transportation made famine always a possibility, the manorial villein or cotter had no fear of losing his job. He probably could not rise out of his class, and could not leave the land, but neither could his class status be lowered nor could his land be taken from him. In this sense, then, the medieval serf owned his home and was bound to the soil.

C H A P T E R I I

Industry

IN the previous chapter the rural communities of mediæval England were described in brief outline. Although the economic life of the time was predominantly agricultural, there was, throughout the same period, a gradual increase of industry and trade which was reflected in the rise of the towns. It is with this more dynamic phase of mediæval life, from the eleventh to the fifteenth century, that the present chapter is concerned.

GROWTH OF TOWNS

The origin of the mediæval town is still a subject of scholarly controversy. In the early centuries of England's history, some towns appear to have arisen from the need of the protection afforded by a walled town. But the desire of protection was not the only force leading to the growth of towns. Probably the continued existence of most of the early English towns is explained by the fact that some trade was carried on.

Although the manorial system was largely self-sufficient, there were, nevertheless, some products that had to be obtained from outside sources, and also there were local products advantageously grown for sale to others. Towns grew up usually at various strategic places, such as crossroads or natural fords on the rivers, or at sites on which an annual fair was held. Markets developed in these towns for the exchange of local farm commodities for salt, iron, tar, and other products of distant places. With the growth of population at such points there was an impetus to the development of specialized handicraft manufacturing to meet local needs, and later to meet the needs of the surrounding territory.

Usually the town, having grown up within the geographical limits of a feudal estate, belonged to some lord or churchman, or perhaps to the king. Sometimes the town was originally a manor or village. In any event the feudal dues were still payable yearly to the lord by the people of the town. But instead of receiving payments in labor or in kind, the lord often granted a charter to the town enabling it to collect the feudal dues from the citizens and to make the payment to him in a lump sum. The king, whose estates were so vast, was quite willing to make this commutation of feudal dues, but the lords of the manor usually had to be persuaded. This persuasion, however, was made easy on occasion by reason of the lord's need for ready cash. Gradually the towns became more and more independent of the lords and obtained concessions that enabled them to govern themselves.

Characteristics of Town Life. Whatever their origin the towns of medieval England had early become trading centers, whose inhabitants were largely engaged in commerce. The rights granted by the charter were usually not given to all, but were restricted to those possessing houses and land within the town limits. These men were called burgesses or citizens and constituted, in the earlier days, the majority of the town's inhabitants. Strangers, Jews, and fugitive villeins from the rural areas were residents without being citizens. In many places it was the law that if a villein could escape from his manor and remain in a free town for a year and a day he would gain his freedom.

The town government was generally allowed many privileges by its charter. Elected by the burgesses, this government could establish courts of justice, pass regulations regarding trade within the town, and act as a negotiator with other towns and with the national government. By the end of the thirteenth century every town of importance in England was represented in Parliament.

Relations of Town to Country. Although primarily interested in trading, many of the townsmen engaged in agriculture as well. Outside the enclosed portions of the town, most citizens possessed some land upon which they could raise a few crops and keep a few cattle. The town, in other words, was not entirely dependent upon the country manor for food, but was, in effect, an "overgrown" manorial village. The town served as a trading center for only a small area. Roads were poor, and travel with oxen and horses was slow

under the best conditions. In some instances, a special advantage, such as location on a navigable river, would increase the area served and so increase the size of the town. The typical town, however, had a population of about a thousand, and served twenty-five to thirty-five manors in an area of perhaps fifteen miles square. The town, therefore, was an integral part of the medieval life. It was hardly more than a large village whose population spent a good bit of their time in trade and commerce but who returned to the land in the busy seasons to engage directly in agriculture. Here, however, was an extension of individual division of labor and geographical specialization, despite the fact that some people on the manor were still occupied in handicrafts, even as those in most of the towns spent part of their time in agriculture.

GILD ORGANIZATION

MERCHANT GILD

The right to engage in trade, even in the towns, was never freely enjoyed by every individual. The control of trading activities was possessed at first by the feudal lord, but was gradually delegated or granted by him to others. The merchant gild, sometimes called the gild merchant, was the earliest organization to obtain control of the trading rights granted by the lord. This was a society formed primarily for the purpose of obtaining and keeping the trading privileges within a given city as a monopoly for its members. Non-mem-

bers could carry on no trade except in foodstuffs. The term "merchant" did not have the same connotation in the medieval town as at present. Instead, it included two types of economic activity. It embraced not only those who were engaged exclusively in buying and selling, but also those who carried on small household manufacturing and sold their products themselves. Thus, in the beginning the merchant gild probably included the majority of the town's population. At first, indeed, membership was apparently open to all citizens or burgesses who could pay the membership fees.

Functions of the Merchant Gild. The chief function of the merchant gild, as stated above, was the maintenance of the special trading privileges that had been granted to the society by the lord. Regulations limiting trading by non-members were strictly enforced. Equally important, however, was the task of self-discipline; that is, the task of seeing that members dealt fairly with purchasers and that craftsmen maintained the quality of the goods they sold. Among the rules of the gild were regulations against forestalling, that is, buying or selling goods on the way to market in order to drive a better bargain; against regrating, which consisted of buying goods to sell them at a higher price without adding any value to them; and against engrossing, or holding back goods as a means of causing a rise in price. The gild also arranged trade agreements with gilds of other towns, regulated the trade done by foreigners in the town, and fixed the hours of trade for all. Though persons not members of the gild could trade in foodstuffs, the gilds regulated this trade also.

There were weekly or bi-weekly markets to which the farmers came from the neighboring villages with products they had to sell. Such informal marketing arrangements are still found in many small towns in England and also in this country.

Social and fraternal duties likewise were included among the functions of the merchant gild. The sick were visited, impoverished brothers were aided, and funerals and Masses were arranged for the departed. In addition the gild was interested in political affairs. Frequently the gild was the same as the governing body of the town, and the gild hall was often the town hall. This was especially true in the late Middle Ages, and the disappearance of the merchant gild was caused in part by its gradual identification with the town government.

It should not be supposed that all of the members of the merchant gild were important merchants. Many of them were chiefly interested in agriculture and farmed their lands which lay outside the town. In their spare time they traded and manufactured but, as has been shown, division of labor in the early Middle Ages had not yet gone so far that many people could devote their entire time to one occupation. A larger population or an extended market was needed before undivided attention to a specialized occupation was required or was possible. It was for much the same reason that early American colonists were necessarily "Jacks of all trades." Gradually as towns increased in size, great merchant houses developed, particularly in London.

Decline of the Merchant Gild. During the twelfth

century the merchant guilds were to be found in nearly every city and town in England. Gradually, however, they declined in power and their functions were assumed by the town government or usurped by the rising craft guilds. Internally, the merchant guild became increasingly exclusive. Whereas formerly almost any citizen who could pay the admission fee was admitted, the organization came to grant membership to very few new members. Furthermore, the merchant guild became a governing body more concerned with political questions than with economic matters.

Then, too, during the twelfth and thirteenth centuries the towns were growing simultaneously with the development of the surrounding country and with the growth of trade at home and abroad. It gradually became possible for men to devote themselves entirely to the production of one commodity, because there was a market large enough to keep them busy at one occupation. Inasmuch as the several persons engaged in a particular trade usually carried on that trade on the same street, they naturally banded together to further their own best interests.

CRAFT GILDS

Development of Craft Guilds. Because the interests of craftsmen did not always coincide with the interests of merchants, and because there were special problems that the merchant guild was not qualified to handle, in each town there developed, in place of the single guild merchant, numerous craft guilds or associations of craftsmen, such as the fullers, the dyers, the cordwainers, and

the tailors. There were as many different craft guilds in each town as there were prominent crafts. The guild of weavers was one of the earliest of which there is a record. Cloth manufacturing probably was one of the first industries in which sufficient demand for the product enabled a group of artisans to devote themselves entirely to the trade. By the middle of the fourteenth century the craft-gild organization of industry had reached its highest point of development, though it continued to be important until the sixteenth century.

The precise political status of these new guilds is not certain. Some authorities have held that they were entirely self-regulating bodies depending not at all upon the regulations set up by the municipal authorities. Other writers have stated that the city government maintained a great deal of control over the craft guilds and gave them jurisdiction only over matters directly concerning their particular craft. Certainly, however, they were the instrument through which the religious sanctions of the time were enforced.¹

In 1363 an act of Parliament provided that each artificer must join the guild of his chosen craft, and that so-called trespassers should be punished. Self-regulation by the guild, based on a strict moral and religious code, was the rule, even when the town authorities held the power of supervision. There is no doubt that, however the authority may have been distributed, all economic activities were subject to stringent control. At first these rules were rather simple and provided merely

¹ See below, Chapter IV.

for principles of good workmanship and fair dealing. Gradually, however, regulations were devised concerning apprenticeship and admission to the trade, and more minute rules were formulated dealing with standards of workmanship.

Despite moral obligations to the contrary, "let the buyer beware" was apparently the rule of unregulated trade. If a weapon maker could solder a broken sword and sell it as new, or if a metal worker could pass some baser metal for gold, he would occasionally do it. What the public wanted, therefore, was some assurance that the goods they bought would be of standard quality and made with reasonably good materials by capable workmen. This public demand, supported by the power of the Church, was probably the reason for the minute regulations promulgated by the guilds and by the town authorities.

Organization of the Craft Guilds. A boy who decided to learn a trade was apprenticed to a master, usually for a period of seven years. During those years the master was to teach the youth the "mysteries" of the craft as well as a small amount of common schooling. The boy lived with the master's family, and was given his food, clothing, and usually a little pocket money, but no wages in the modern sense of that term. His wages were "in kind", consisting of his lodging and his education in the trade. When the apprentice had finished his term of service and had satisfied the guild authorities that he was worthy of membership, he was admitted to the guild as a journeyman. A journeyman was in reality a day worker; that is, he hired himself

out to some master as a helper by the day. It was from this group that the permanent wage-earning class eventually emerged; but at the height of the gild system the journeyman remained such only until he could start in business for himself and become a master.

The master was not solely an employer, sometimes not at all. He was an enterpriser, a man who decided that a new shop was likely to succeed and started that shop and managed it. More than likely, too, his own capital was invested in his business, or he borrowed a small "stake" from his former master or from a merchant. Ordinarily the master craftsman not only made the article, but sold it, thus performing also the function of a merchant. He was among the leaders in his craft and frequently employed a number of journey-men workers as well as several apprentices. Usually the master himself worked along with his employees. Always, he was a gild member subject to all the rules enforced by the gild.

The wardens or overseers were an important part of the internal organization of the craft gilds. These men, elected annually by the masters of the craft, were given the duty of enforcing the rules and regulations laid down by an assembly of the master craftsmen of the town. They were to make sure that better wares were not put on top of the bale as a screen for inferior products in the bottom, that groceries were not made heavier by the addition of water, that the hours of labor for journeymen and apprentices were strictly enforced. Work was not permitted after sunset, not so much for humanitarian reasons but because poor lighting led to

poor products. As time went on and the gild ideals began to decay, this group of overseers undoubtedly had a thankless task trying to enforce regulations no longer really desired by the majority of the craftsmen.

Functions of the Craft Gilds. The economic functions were the most important phase of the gild organization, although social and religious activities also played a part. The gild, as already indicated, had jurisdiction over all matters pertaining to the conduct of the craft. The gild determined the conditions of apprenticeship and passed upon the qualifications of applicants for admission to the trade. It regulated competition among the gild members. The materials and methods employed and the prices charged for the final product were subject to strict control. In other words, anything having to do with the quality and the price of the product was within the jurisdiction of the gilds.

In many ways the gild resembled a modern lodge. The gild hall formed a convenient meeting place when the day's work was finished. If a member was ill his fellow gildsmen would visit him. When he died, his former friends would provide a proper burial and would often pay for Masses to be said for him. The gild, in other words, was a benevolent as well as an economic organization.

Another secondary aspect of the gild activity was concerned with providing entertainment for the town or city. The various gilds were accustomed, on stated occasions, to present miracle plays depicting scenes from the life of a saint, or mystery plays representing scenes from the Bible. These plays were usually presented in

cycles, each gild having responsibility for certain scenes. The shipwrights of York, for example, depicted the scene of the building of the ark. The fishmongers and the mariners were responsible for the presentation of the scenes in the ark, in which Noah's wife was always a terrible scold who made life miserable for poor Noah. The goldsmiths and moneylenders would present the visit of the Kings of the Orient to the cradle of the Christ Child. The performances were often elaborate, the gilds competing with one another to give the most impressive performance. Later in gild history, when the presentation of plays was no longer accepted as part of the gilds' duty to society, the people were discontented, and even demanded that the town authorities require the performance of the mystery plays as of old.

Economic Importance of the Craft Gilds. The rise of gild organization, first in the form of the merchant gild and later in the form of numerous craft gilds, marked the change from the primitive stage of family manufactures to the handicraft or gild stage of industrial production. In the stage of family manufactures there was no class of artisans devoted exclusively to making a particular product, because most of the requirements of the family group or of the manor were met by the members of the group, and there was comparatively little trade. The handicraft gild stage, on the other hand, was characterized by the fact that a body of men applied themselves more or less exclusively to a particular trade as local markets expanded and foreign trade increased. At this stage of develop-

ment, therefore, division of labor in industry found its real origin.

There was also the beginning of production for a general market in addition to production for a customer on order. True, the market was limited, inasmuch as trade between towns in handicraft products was still comparatively small, and in the smaller towns the master continued to manufacture only on order. Nevertheless, the gildsman was an enterpriser in that he purchased raw materials, fabricated them, and sold them to customers who came to the shop. When he began to manufacture for the general market, he assumed some of the risks that characterize modern industrial society. He was then producing for future demands, in the hope that the price received for the product would be sufficient to pay the expenses of manufacture and to yield him a profit.

Capital continued to play a small part in industry. A rented house, a few tools, and sometimes a small amount of money for the purchase of raw materials, were all that was needed to establish a business. Skill and a small group of steady customers were of prime importance. Furthermore, in the earlier days of the system, at least, this capital usually came from the savings of the master craftsman himself. Credit was still in its infancy, limited in general to the transactions of kings, nobles, or great merchants in large trading centers like London.

In no sense did the gild resemble a modern trade union. Though it was a union of all members of a particular trade, this included journeymen, apprentices,

and also the masters, who were enterprisers and employers as well as craftsmen. The modern trade union does not accept the employer as a member. The inclusion of the entire group in the medieval gild was made possible because there was at that time no class of permanent wage earners in the modern sense of the term. In those days a man expected to be a journeyman only for a few years until he could save the small amount needed to establish himself as a master, or, possibly by marrying his master's daughter, to become a partner in his business.

Summary. Both in medieval agricultural life and in medieval town life, stability was an outstanding characteristic of the existing system. Such stability was possible when the population was increasing very slowly and the number of workers in any trade was increasing at about the same rate. Custom ruled generally, and each town remained more or less self-sufficient so far as concerned the manufacture of goods in general use.

Trade was confined largely to luxury goods and to goods impossible to produce locally, which were obtainable in exchange for staple agricultural products. At this time there was no export from England of the manufactured textile products for which later she became so famous. Instead, wool was exported in unfinished form to Flanders and constituted one of the large items in early English foreign trade. The development of this trade, and the increasingly rapid changes in English industry which followed will be reviewed in subsequent chapters.

CHAPTER III

Trade and Finance

THE development of medieval towns as centers of trade and handicraft manufacture has been traced. In this chapter the methods and institutions of trade and finance during the same period will be described. These institutions are especially significant inasmuch as they constitute the beginnings of much that is modern.

MEDIEVAL TRADE

MARKETS

Local Markets. Medieval markets developed from the trading carried on between the villeins of the manors and the inhabitants of adjacent towns. Very early in the history of the towns these markets were organized and regulated to some extent by the local governments or the merchant guilds. Special market days were designated each week so that buyers and sellers could easily meet each other. A place was set

aside for the purpose, perhaps in the churchyard or in a vacant space near the center of the town. Rules were formulated to insure fair dealing. The market opened and closed at specified times, and the rules described in the preceding chapter with reference to forestalling, regrating, and engrossing were also enforced in this country trade. The commodities traded at the market were generally those produced locally on the manor or in the town. Frequently food products were exchanged through barter transactions by the farmers for the manufactured commodities of the handicraftsmen. For foreign wares, or goods from more distant parts of England, the people ordinarily waited until the great fairs were held.

Fairs. Even at an early date a considerable foreign commerce developed, involving the export of such English products as wool, lead, and tin, in exchange for essentials such as iron and tar, or luxuries such as the fine cloth of Flanders. The institution that developed for the conduct of this trade was the fair, held once a year or at the most semi-annually or quarterly. By the thirteenth century, such fairs occurred regularly in most of the important cities and towns of England, as indicated in the map on page 45. The franchise to operate a fair would be granted by the king (for some consideration or as evidence of kingly favor) to a town, a monastery, or to the lord of a large manor. The holder of the franchise would appoint someone to serve as "lord of the fair", who, with his assistants, would have complete charge of its conduct. The owner of the fair would receive the revenue from the rent of the stalls,

from the customs that were levied on the goods sold, and from the fees and fines of the special courts that invariably were established for the adjudication of disputes arising out of the trade at the fair.

During the period of the fair, trading was discontinued throughout the surrounding countryside. Within a "seven-league circuit" around the Winchester fair, for instance, all trade was suspended and guards were posted on the outskirts to see that the rules of the monopoly were enforced. The members of the merchant guild of Winchester, however, were freed of the tolls and duties that others had to pay. All of the craftsmen of the town were required to set up their shops at the fairground for the duration of the fair. The arrangement of the fairground itself was planned to facilitate buying, supervision and inspection as well as the collection of tolls. Merchants selling particular products were assigned small wooden stalls grouped together in the same location or on the same street.

The foreign goods bought at fairs (probably because they were sold in wholesale lots) were cheaper than similar goods bought at markets. Here the manor lords and villagers could obtain good prices for wool and could buy salt, fish, tar, fine cloth, millstones, and iron or brass kitchen utensils. The fair was frequented by noble and serf, by churchman and soldier, by merchant and monk, and by peasant and craftsman. The fair of Stourbridge, near Cambridge, was a market not only for European products but for products of the East, as well as for everything that could be bought at the time.



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After printing had been introduced, the fairs even became the markets for books.

An interesting institution found at every fair was the court of pie-powder, sometimes called *pied poudré* or dusty foot, probably because at that court were heard the cases of merchants and wayfarers. In those days of intense localism the merchant from abroad or even the merchant from another part of England would have been under a distinct disadvantage if a dispute to which he was party had been tried in the ordinary local courts. These local courts administered the common law, the proceedings of which were extremely formal; and an error in procedure was likely to be fatal to the case. The procedure of the courts at the fairs to administer the merchant law was more informal, and greater consideration was given to the equities involved in contractual agreements. These courts settled a great variety of disputes—over debts, over contracts of sale or purchase, over alleged short weights or false measure—and even over criminal cases arising at the fairs. Always the judge was supposed to settle the case on the basis of his conception of what was just and fair rather than by any written law. Furthermore, he had to settle the cases with dispatch. Adjournments were for an hour or two, or at most a day, rather than for a month or longer as was usual in the other courts of the time. Much of later merchant law found its precedents in these courts of pie-powder.

Though the merchants of the fair traded as individuals, a wayward trader was the responsibility of all the other merchants from his particular town. If a mer-

chant gave short weight and absconded before he was caught, the others from that town were required to pay his fine, so great was the spirit of localism. When the period of the fair—from three days to three weeks—was over, the merchants packed and went either to the next fair or back to their home towns. The buildings that housed the fair were taken down and the field might be plowed and planted and a crop harvested before the time for another fair.

INTERMUNICIPAL TRADE

The fair in reality represented a concentrated part of the interdistrict trade that was carried on throughout the Middle Ages, but it was by no means the only form of trade. In the interim the widely scattered demand for “foreign” wares was met in part by individual producers or traders—tinkers, bagmen and the like—who traveled the countryside disposing of their wares, even as the peddler wandered through New England and the South before the Civil War.

Nor was more formal trade at a standstill during the three to six months or year that elapsed between fairs. The weekly markets continued to flourish, and in addition a lively wholesale trade developed among the merchants of different towns. Trade between the cities of England and those on the Continent was also expanding during the early years of the Middle Ages. It was this wholesale trade primarily that was under the control of the merchant gild as described in the preceding chapter. All merchants from other towns—even in England—were considered foreigners, and their trad-

ing activities were strictly regulated. Often they could remain for a very limited time and then only if they stayed at the homes of members of the local gild who were responsible for the good behavior of their guests. Towns in England often entered into trade agreements with other towns in much the same manner as nations do today, granting concessions to the merchants of other towns in return for special consideration to their own merchants.

The volume of medieval trade was limited by the crudity and inadequacy of the contemporary modes of transportation. Boats were used extensively along the coast and on navigable streams. Land transportation was by pack horse or in two-wheeled carts. The four-wheeled wagon was not introduced into England until about the middle of the sixteenth century.

FOREIGN TRADE

During most of the Middle Ages the foreign trade of England was in the hands of foreign merchants. Englishmen seemed to have neither the desire, the experience, or the capital to undertake the sea voyages, nor the business organization necessary to obtain goods from distant countries. The burgesses of the English towns tolerated the foreign merchants because they brought luxuries for the nobles and necessities for all, but jealously scrutinized their trade and hampered it with minute restrictions. The king and the nobility, on the other hand, were favorable to the foreigners, because the fees and tolls levied upon them enriched the royal treasury.

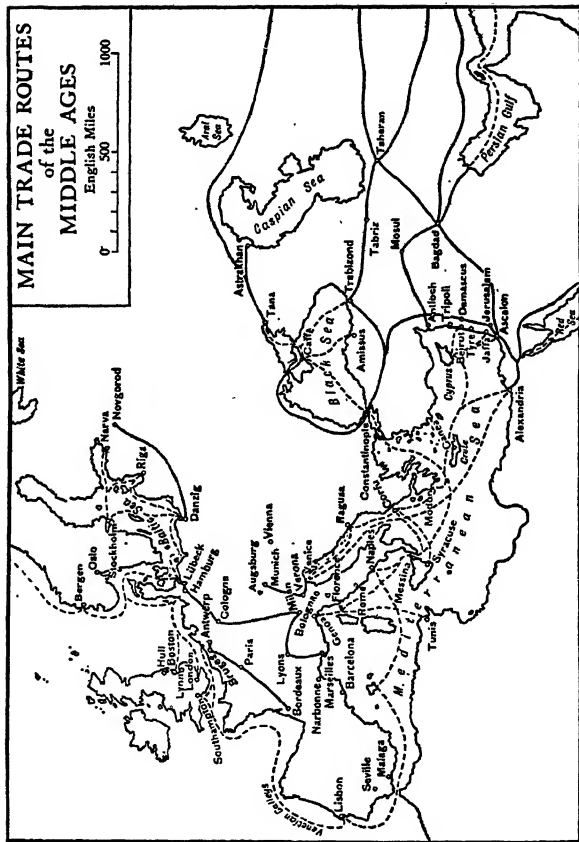
Gradually the foreign merchants gained more and more privileges. They were allowed to form settlements of their own within a city instead of staying at the home of some local burgess, and were permitted to deal with others than the burgesses. In 1303 the *Carta Mercatoria* was promulgated by Edward I, extending these special privileges to foreign merchants throughout England in return for the payment of additional tariffs. Town authorities were instructed to give speedy justice according to merchant law to any case coming before them, and a special court of the king was established in London to hear cases on appeal. Only in the retail sale of most articles were the English burgesses allowed to retain their time-honored monopoly. Apparently this law was never strictly enforced, and for many years afterwards the foreign merchant did business in face of local hostility tempered only by fairly consistent royal support.

Trade Routes. During the period from the tenth to the fifteenth centuries when the Mediterranean countries were in the ascendancy because of their strategic location on the trade routes to the East, the merchant guilds of the Italian cities and especially of Venice held an important place in the foreign trade of England. From the southern countries came wines, sugar, dried fruits, drugs, and dyestuffs; and from the more distant Far East there flowed through Venice a steady stream of such luxuries as silk and cotton, narcotics and other drugs, gems of all kinds and above all the various spices that the medieval Englishmen demanded in order to render more palatable their monotonous diet.

The merchants of Venice, co-operating in a joint venture, sent yearly a fleet to Flanders and to England. The merchants who accompanied this so-called Flanders Fleet sold their products at the great fairs and returned home with English wool, tin, lead, and iron.

Another group, which rose to even greater prominence in the foreign trade of England, especially in the fourteenth and fifteenth centuries, were the representatives of the Hanseatic League. This league was composed of the *hanse*s or merchant guilds of more than a hundred towns in north Germany and the Low Countries, which were banded together in an offensive and defensive alliance to protect from all interlopers the trade of their merchants in the Baltic. The *Easterlings*, as these merchants were sometimes called, brought to England the products of the Baltic countries and of Russia, such as herring, tar, salt, silver, furs, coarse manufactures, and finer products of the East, which they had purchased at the great Russian fairs. They, too, sought in exchange English wool, tin, and lead.

The Hanseatic League was sufficiently strong and wealthy to win important concessions for its representatives in England. In London it had an imposing permanent settlement called the *Steelyard*, comprising warehouses, residences and gardens, all surrounded by a high wall as though it were a gild inside a fortress. No married man could be admitted to residence; all dined together in a commons, and each master had a suit of armor. Trading, however, appears to have been an individual rather than a cor-



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porate matter. Because of their collective wealth and influence, the Hanse merchants were even allowed retail privileges within the city of London. Thus, in return for large fees and the maintenance of some of London's many gates, they were more favored than some of the other foreign merchants.

A third, though less powerful, trading group consisted of merchants from Flanders who combined for mutual help in what was called the Flemish Hanse of London. While the trade of the Flemish Hanse was not the geographically far-flung trade of the Venetian merchants and the Hanseatic League, in quantity it was of great importance; for the Flemish traders were chiefly interested in the extensive woolen trade of medieval England. They purchased large quantities of English wool and sold in return fine Flemish cloth of a quality that English craftsmen had as yet neither the knowledge nor the skill to manufacture. For a long time the Flemish merchants were by far the most numerous body of foreign traders in England. Their importance finally declined, not so much because of the rise of the Hanseatic League, but because of the decreasing demand for imported cloth. This decline in demand for foreign cloth resulted from the increase in woolen manufacturing in England after the introduction in 1331 by Edward III of a group of Flemish weavers. By means of apprenticeship to this group, English craftsmen learned the skills of the famous guild of Flemish weavers. This, together with other subsequent developments, aided the eventual shift of textile supremacy from Flanders to England.

Merchants of the Staple. To facilitate the protection and regulation of foreign trade, the English government in the early part of the fourteenth century required that products known as "staples", *viz.*, wool, leather, tin, lead, and other goods extensively exported, should be gathered for exportation in certain English towns known as "staple towns." Here the goods were registered, weighed, and taxed before being sent abroad to a specific port in Flanders also known as a staple town. As long as Calais in France remained English territory, that town was made the staple town abroad, for it possessed the advantage of being close to European markets as well as under English rule.

It was in this trade in staples that English merchants first became organized to carry on some of their own foreign trade. A group called the "Merchants of the Staple" or Staplers, formed what was known as a "regulated company." A regulated company received a charter from the crown which specified certain requirements, but the organization under that charter was very loosely knit. The company had its own officers and inspectors to make and enforce certain rules, but each member of the company traded with his own goods or capital and took his own chances of selling those goods, even in limited competition with his fellow members. These merchants were undoubtedly drawn together because of mutual interests and mutual risks, and were given a monopoly as against other Englishmen by the royal government, which was beginning to take an active interest in trade as a means

of enriching the treasury and making the nation powerful. The duties of the officials of the company were to adjudicate disputes between members according to merchant law, to fix minimum prices for the staple products, and to supervise the collection of government tariffs.

The merchants of the staple flourished for many years, though apparently they never traded in anything but staple products, especially raw wool. As the woollen manufacturing industry increased in England during the fifteenth and sixteenth centuries, however, the staplers went out of existence and the individual merchants either joined newly chartered regulated companies, or bought stock in one of the joint-stock trading ventures that later developed. They will be described in a subsequent chapter.

MEDIEVAL FINANCE AND CREDIT

MONEY

Throughout the medieval period there were some transactions, both on the manor and in the trading activities of the towns, that involved payments of money. As time went on these became more and more important. Barter, the direct exchange of one good for another, affords a very unsatisfactory basis for extensive trade, because in each exchange a double coincidence must be found. That is, the holder of one commodity must find another person who wants this good; furthermore, the second person must possess another com-

modity that the first person desires. Also each party to the trade must ordinarily want the other's commodity in its entirety, for under barter it is difficult to divide values. Money, therefore, seems to be absolutely essential in facilitating the operation of exchange. Moreover, a money that can be depended upon by all as being full weight and not counterfeit is of primary importance.

Internal commerce in the Middle Ages was particularly handicapped by the type of money that was available for trading. Coined money had been known in the Roman Empire, but during the early Middle Ages, which witnessed the decay of so many ancient institutions, the system of coining money practically disappeared. As the use of money revived, goods previously bartered were exchanged for bullion (uncoined metal) and somewhat later for coined money. Although coins had been in limited use as early as the ninth century, gold was not reintroduced into the coinage systems of the western nations until about the middle of the thirteenth century, when the gold *florin* was minted in Florence. A hundred years later, money was again fully established in Europe, with gold, silver, and copper coins in circulation.

But the institution of money had hardly been re-established before it became disorganized. To the kings and nobles of the period, money furnished the sinews of war, and to get more money for their numerous conflicts rulers would reduce the amount of precious metal used in minting each coin, thereby making more coins available for their own use. Thus the merchants

found they could not rely on governments to maintain standards of value.

In England, a mass of different coins was in circulation. Besides the money issued by the king, coins issued by various nobles, Byzantine gold coins, and other foreign coins circulated side by side. The Norman kings rarely tampered with the coinage, but commencing with the reign of Henry II there is evidence of several debasements in the metal content of coins. For example, between 1300 and 1464 the weight of a silver penny dropped from twenty-two grains to twelve grains of silver. The depreciation in the value of money reflected not only the financial legerdmain of the rulers, but also the prevalence of counterfeiting, clipping, and "sweating" of coins, despite the strict prohibition of these practices and the stern penalties visited on those found guilty of them. Such a number of different kinds and weights of coins made the existence of money-changers absolutely essential. They were to be found in towns and at the fairs, buying and selling the various coins in circulation.

CREDIT

Book Credit. Credit, likewise, was known in the Middle Ages. Both in domestic and foreign trade, credit transactions existed side by side with cash sales, though the extent of each remains unknown. The records of contemporary domestic trade give evidences of the beginnings of present-day mercantile credit, which arises when goods are delivered by one business house to another in return for the promise of future

payment. A record of the transaction was kept on the books of the creditor firm, much as modern "charge accounts" are kept. Such credits were "demanded and allowed at every stage through which the goods passed from importer or producer to consumer."¹ There are also records of the reverse type of credit, still to be found, in which the buyer and not the seller granted the credit. That is, a merchant would advance money or goods to the producer of a commodity to be delivered later. Many Flemish merchants made advances to sheep raisers who later delivered wool in payment. These types of commercial credit were found throughout medieval Europe.

An illustration of the extent and manner in which the late medieval merchants carried on trade on credit is afforded by the following extract:²

"The Celys, who were apparently an average fifteenth-century Staples' firm, sold wool on credit in eleven out of twelve transactions recorded in their letters and accounts. Some of George Cely's notes about his financial transactions at the fairs of Antwerp and Bergen-op-Zoom show that he never had much ready money on his hands, and most of the firm's capital consisted of wool not yet fully paid for, and of debts owing to them."

Payments through Clearing of Credits. At the same time, more formal credit transactions appeared in the course of trade at the fairs and in foreign commerce. During the period of a fair, merchants would keep a

¹ Postan, M., "Credit in Medieval Trade", *Economic History Review*, Vol. I (1928), pp. 238-244

² *Ibid.*

record on their books of all credit transactions. Some of these items might have accumulated on the books during the period between the fairs while others were for actual transactions at the fair. Toward the end of the fair, two persons were appointed to compare all the fair books and balance the credits, after which the merchants settled the differences. In reality this clearing of short-term mercantile credits and the method of their settlement were the forerunners of such organizations as modern clearinghouses. In this manner, accounts amounting to hundreds of thousands of gold *florins* were settled with the use of very little cash.

A more formal type of credit instrument came to be utilized when a merchant was unable to settle his balance in cash at the time; with the assent of his creditor, he would give the latter his promissory note, payable at the next fair. Consequently, the time of the fair became a customary date for the settlement of debts.

Bills of Exchange. In trade between merchants of towns in different countries another way of making payments developed. Transportation of bullion was expensive, and often illegal, yet the medieval merchant constantly found himself under the necessity of remitting funds to some distant city. Out of the necessity of daily affairs and from professional experience, the bill of exchange was developed to meet this need. A bill of exchange is an order drawn by one person on another (who is either indebted to the first, or is holding funds subject to his order) ordering the second to pay a certain sum of money to a third person.

This type of transaction made its appearance about the eleventh century when Italian bankers sold to customers, who might be going to a distant city, a bill of exchange, or right to collect money from one of their branches in that place. By a careful matching of sales of bills in opposite directions it was possible to meet the requirements of many people for the safe transfer of funds, greatly reducing thereby the necessity for shipments of coin. This method of transferring funds spread rapidly throughout Europe though, of course, it did not reach its present degree of perfection until centuries later.

Public Credit. During the later Middle Ages there was a considerable growth in the extension of credit to governments. This type of credit differed from commercial credit in that "Great lords do as they will." Many of the early loans to princes were forced loans. A subject who relied upon the protection of the prince was often forced to lend capital without security for its return; the rate of interest, if any were paid, was certain to be low. Voluntary public loans were also made, though usually at high rates of interest and with some security for repayment. This security might consist of the pledge of a respected city or the right to collect various specified taxes of the government for a stipulated period. Thus various English kings borrowed from Italian bankers large sums, most of which were never repaid. Later, German bankers extended loans, and for many years afterwards governments were dependent upon such private banking houses for funds.

Princes and nations alone enjoyed this prerogative of sovereignty by virtue of which they did not have to pay their debts unless they thought best. Cities could be forced to pay their debts by means of an attachment; that is, a legal seizure of the property of the burghers of the city. For this reason, the credit-rating of the cities at the medieval bourses or stock exchanges was usually good. They were often able, therefore, to raise capital through the sale of annuities; that is, citizens with capital would lend to the city on its promise to repay in periodic future installments.

By the end of the Middle Ages, a system of commercial credit had been fairly well organized; but on the whole, public borrowing, except on the credit of cities, remained unsystematized and intermittent. The borrowing by rulers and governments depended upon individuals rather than upon an organized institution.

Interest. For a thousand years the Christian Church had condemned the payment of interest because money was thought to be barren and unproductive, and no Christian could charge for its use without endangering his position both in this world and the next. Hindered by no such compunctions or religious restrictions, the Jews became the moneylenders of the time; but when they were driven out of England in 1290, ways were found to circumvent the restrictions.

In fact, beginning in the thirteenth century, the demand for ready funds to finance the Crusades, and the rise of credit institutions in Italy, led to a gradual relaxation in the official attitude of the Church toward interest. The numerous methods of modifying the

restrictions will be discussed in a later chapter. It is sufficient for the moment to note that the restrictions gradually crumbled away, although it was not until 1545, during the reign of Henry VIII, that an interest charge of ten per cent was made legal in England, and only rates higher than that were considered to be usurious.

BANKING

The activities of the early medieval banking houses in arranging for the transfer of funds from one part of Europe to another have already been described. In addition, however, they fulfilled such important functions as lending funds, acting as money-changers, accepting funds for safekeeping, and accepting demand deposits for making payments by checks.

The great expansion of the Florentine wool trade has been attributed in considerable measure to the large amount of capital funds made available by the banks of that city. Those banks enabled the merchants and industrialists "to purchase raw wool and cloth in tremendous quantities, to establish large workshops employing thousands of artisans, and to win for Florence its foremost position in the wool trade."⁸

Another function of banks was to act as money-changers. As mentioned earlier, a great variety of coins issued by different mints was in circulation throughout Europe. Many of these coins were worn or clipped. A merchant willingly paid for the money-changing

⁸ Thompson, J. W., *Economic and Social History of Europe in the Later Middle Ages* (1931), p. 416

service rendered by a bank in taking his coins, weighing them, and giving him credit on its books for a deposit to the amount of their bullion value; for the bank recorded the credit on its books in terms of the local monetary unit for the convenience of the merchant. The development of deposit banking was thus a concomitant of the business of money changing.

Banking appeared first in Barcelona and some of the Italian cities. Funds were deposited by merchants or private individuals with the banking houses as general deposits, which "were demand obligations on current account comparable in all respects to the deposit in a modern bank."⁴ That is, they were subject to withdrawal or transfer at any time on the order of the depositor. At first, withdrawals were allowed only upon personal application and conference with the banker; but at an early date something akin to the modern check came into use in order to facilitate transfers of funds to a third party.

Still another function of these banks was the lending of funds by allowing the depositor to make payments by drawing checks in excess of the amount of his deposit with the bank. This transaction corresponds to present-day borrowing by overdrafts as practiced in England. Lending by banks on the promissory notes of merchants did not develop during the Middle Ages, probably because satisfactory legal safeguards for short-term credit instruments had not evolved.

From the late Middle Ages have come many con-

⁴ Usher, A. P., "The Origins of Banking", *Economic History Review*, Vol. IV (1934), pp. 399-428.

tributions to modern economic society. Most of our modern institutions in the field of money, credit, and banking find their origins among the Spanish and Italian traders who, at the end of the medieval period, had invented credit instruments and crude banking, and had adapted themselves to the unsatisfactory monetary systems of the time.

CHAPTER IV

Economic Ideals of the Middle Ages

At various points in the preceding chapters references have been made to the medieval attitude towards economic activity. This attitude reflected the rather paradoxical mixture of "particularism" and "universalism" — to use the terms of a recent writer — that characterized medieval thought. Although the daily work of the medieval agriculturist, craftsman, or merchant, on the one hand was governed by detailed regulations designed to protect local interests, nevertheless he had, on the other hand, "a lively consciousness of belonging to an organization embracing the whole of Western Christendom."¹ This organization was the Church, which constituted an extremely important force in the life of those centuries. No understanding of economic ideals can be obtained without recognizing the power of that universal organization.

¹ Heckscher, E. F., *Mercantilism* (translated by Mendel Shapiro, 1935), Vol. I, pp. 34-35

MORAL OBLIGATION

All economic relationships were subject to moral obligations which the Church defined for the laity. Modern society is based upon a theory which implies that each man may properly strive for gain and that by so doing every other person will be benefited. In medieval society, on the contrary, a man was restrained in earning a living by a feeling of responsibility and consideration for his fellow man.

The *purpose* of economic transactions determined their validity under existing canon law. So long as a man traded, manufactured, or farmed with the purpose in mind simply of making a living, the Church did not condemn his activities. If his purpose, on the other hand, was to increase his stock of goods, he was considered to have succumbed to the sin of avarice. The sin was particularly grievous if, by increasing his goods, he deprived another of a livelihood, or by sharp trading took advantage of another's need.

Thus the Church sought to enforce the golden rule in economic relationships. The enforcement of these laws was comparatively easy since business was not isolated from religion. Everyone belonged to the Church, and a man ordinarily did not practice his Christianity only on Sundays. The Church permeated the whole life of the people, holding over them the fear of a real hell for disobedience of its rules, and promising a future heaven for compliance. The Church's code of ethics, called the canon laws, was the governing principle of medieval trade, industry, and commerce.

*PRICES AND WAGES IN THE
MIDDLE AGES*

Just Price. Price — that is, the amount paid in money or kind for the goods and services exchanged — has been frequently mentioned in previous chapters. At present, competitively determined prices are considered a normal and desirable feature of the economic system. The price structure of the Middle Ages, however, rested on an essentially different basis, although even then it was of course impossible to defy altogether the operation of economic forces. In general, three distinctive situations with respect to prices were to be found.

The prices charged at the markets for agricultural products were generally determined by the relation between the demand for and supply of those commodities. The manorial serf raised his products, not for order as the guildsman manufactured his wares, but for his own use and for sale. When the crop was ready for market he had to sell it for what it would bring at the time he carried it to town. And what it would bring was determined, as it is today, by the conditions of demand and supply. The system of market-controls existing at the time was not sufficiently strong to overcome those economic conditions. Occasionally, to be sure, a local authority would determine a "fair price" for a product in a given market, but that price ordinarily would merely reflect the conditions of demand and supply.

In the earlier years of the Middle Ages competition probably was the factor likewise determining the prices of the imported products usually sold at fairs; they were produced in distant lands over which English guilds had no control. With the growth of the trading monopolies in England and elsewhere, the prices of these imported goods were more likely to be monopolistic prices. In any event, because of the risks involved in transportation, the people of the Middle Ages had to pay high prices for such goods compared with locally produced or "staple" articles, in order to induce the merchants to handle them.

For most manufactured articles, however, competition was of little importance, as prices were based on rules of justice. The so-called "just price", based upon the golden rule, was sufficient to cover both the cost of the raw materials and a "just wage" for the producer. No amount was included for the use of capital or for risks taken, because at the time capital equipment was practically nonexistent; and, inasmuch as the products of industry were usually sold locally on order, business risk was at a minimum. The owner of the business was entitled to some recompense, but that was included in the wage payment.

Apparently, there was a realization that price could not be justly fixed at an absolute figure. St. Thomas Aquinas, the famous philosopher-churchman of the period, stated that "Sometimes the just price cannot be determined absolutely, but consists rather in a common estimation, in such a way that a slight addition or

diminution of price cannot be thought to destroy justice.”² So long as the price was determined not with an eye to personal gain, but only with the thought of making a living, minor variations were not condemned. Here again the canon law considered the purpose of individual action.

Just Wage. Obviously the just price depended largely upon the just wage. These wages, like other prices, were not generally determined by competition but by ideas of social justice. The standard of justice was custom. A worker, whether hired or self-employed, was entitled to an income sufficiently high to enable him to live according to the customary standards of his craft. The definite class distinctions existing between various crafts were sanctioned by custom. In return for this just wage, a worker was under moral obligation to give honest workmanship. If a worker were dishonest, or if he were paid more or less than the just wage, the Church held that a sin had been committed. So long as a producer or trader, in serving the public, was willing to content himself with a fair wage for that service, his trade was considered good. But if he sought greater profit, his trading was condemned by the Church and he was adjudged guilty of the sin of avarice.

Agencies for Enforcement. Just prices and wages did not enforce themselves. Many of them probably were customary prices, established many years before as “just”, and left unchanged because the prices of the

² As quoted in Jarrett, Bede, *Social Theories of the Middle Ages* (1926), p. 161.

raw materials remained unchanged. Others were fixed by either national or local law. The prices of bread, ale, wine, and meat, determined in this latter fashion, varied according to the market price of the raw materials, and periodically were announced in decrees known as assizes. These assizes undoubtedly did much to develop an orderly procedure of the market.

In addition to governmental authority, each group of producers also enforced standards of just prices and wages. No one outside a local guild could do business; and the guild was responsible to the government, and to the public as well, for the actions of its members. Above all else, however, the authority of the Church, through its influence over the minds of the people, was sufficient to enforce for centuries the concepts of social justice.

USURY IN THE MIDDLE AGES

To the early medieval Church the meaning of usury was perfectly simple—if a lender forced the repayment of one cent more than the amount he had loaned he was guilty of usury. Such a concept came directly and explicitly from the Bible. Furthermore, for centuries before Christianity, money as such had been considered barren of return and therefore no charge could properly be made for the use of it. During the Middle Ages, most of the loans were “spendthrift” loans; that is, loans to people in need of funds to meet personal emergencies, or loans made to nobles for the purpose of outfitting military expeditions. Money for such purposes could be obtained from Jewish money-

lenders or from others outside the power of the Church. Such transactions, however, had little to do with general economic or productive activity; and so long as trade and commerce played a comparatively minor role in economic life, restrictions against interest were rather unimportant. But when the flow of trade began to expand, such a rule imposed an increasingly burdensome restriction.

However, instead of accepting outright the fact that interest payments should be allowed, the Church fathers gradually qualified the concept of usury under certain circumstances to permit payment for the use of money. Thus, in the later Middle Ages, there were several ways of charging interest in fact, if not in name, without incurring the censure of the Church. The general doctrine of the canon law on usury, as on trade, was built entirely upon the nature of a man's intention.³ If money were loaned with the thought of making a profit, a sin had been committed. If, on the other hand, the purpose of the loan was merely to help a neighbor, an extra charge might be warranted by reason of the risk of loss entailed. Methods of helping a neighbor and yet receiving a return on capital funds became more and more numerous. If the borrower were not punctual in repayment, the lender had a right to expect a recompense on the ground that the delay had caused him either an actual loss or the loss of an opportunity for gain. Of course it was presumed that loans of this kind had been made without thought of profit and that the loss suffered was real. It became customary to lend free

³ Cf. Coulton, G. G., *The Medieval Scene* (1930), p. 144.

of charge for very short periods; but by allowing the funds to be retained, for a time thereafter, a payment might be exacted for the inconvenience resulting from the "default" of prompt payment.

A method of making what in effect constituted an interest-bearing loan, was through the purchase of a rent-charge. A person with funds to "invest" might, by paying a specified sum of money, purchase the right to receive the yearly income from an estate or a business. This was not considered usurious so long as the property or business yielded a revenue. Nor was it usury when a city borrowed money by selling annuities, for in such a case the lender ran the risk of not recovering all of his funds.

The payment of interest for risk was another common method of circumventing the ban on usury. In that connection, St. Thomas argued that it was surely usury if a man loaned money to a ship captain with the understanding that his funds would be returned with a profit; but, if the lender shared with the captain or owner the risk of the loss of the vessel, that assumption of risk was comparable to labor and therefore the additional sum returned would not involve usury.⁴ This doctrine led to an increasing use of the limited partnership device. The limited, or "sleeping", partner could lend his funds, accept some of the risk, and legitimately reap some of the profits.

Presumably all of these canon laws concerning just price and usury were broken, as well as modified. There is abundant evidence that actual usury increased even

⁴ Cf. Coulton, *op. cit.*, p. 149.

after the concept had been liberalized by these exceptions. But the medieval ideal was a laudable attempt to impose a high moral standard on business and commerce, even though such stringent laws were not readily enforceable. They became still more difficult to enforce during the subsequent nationalistic period, as the development of international trade and international money markets increased both the opportunities for investment and the demand for loanable funds.

PART TWO

ECONOMIC NATIONALISM

C H A P T E R V

The Decay of the Medieval Agricultural System

The Period of Economic Nationalism. Part One has been devoted to a description of the economic life of England between the eleventh and fifteenth centuries. The following three hundred years, from about 1450 to 1750, were a period of transition from medieval institutions to the modern economic system. Several major developments mark the economic life of those three centuries. First, most of the medieval institutions, especially the manorial system of agriculture and the gild system of manufacturing, disintegrated with the impact of new forces. Second, a new economic organization emerged, which became the basis for the later development of the modern system. During this period, furthermore, the medieval localism of both town and country gave way to broader national interests as the scope of economic activities expanded. Finally, the central government exercised increasing control over the economic life of its citizens according to the pre-

vailing doctrine of mercantilism. This expressed itself domestically in laws that regulated, for example, the prices of many agricultural products, the amounts of wages, and the conduct of manufacturing. In their foreign relations, Englishmen were minutely regulated in the interest of a strong nation. The government controlled the volume and character of imports and exports, and limited the transport of goods to British ships.

Because of the development of a national economy, and its close regulation by the central government, the centuries from 1450 to 1750 have been designated as the period of economic nationalism. By the end of the period all traces of local loyalties had disappeared, and public opinion and economic efforts were devoted to the promotion of the national interest.

The Acceleration of Economic Change. It is apparent from the many changes occurring during the era of economic nationalism that it was much more dynamic than the preceding medieval period. Indeed, compared with subsequent periods of equal length there was remarkably little change during the several centuries of the Middle Ages, and consequently that period is frequently considered essentially static. But there was some change going on, slowly at first but gaining momentum as time passed and cumulative forces of change and growth became more and more powerful. The growth of towns began even before the Norman Conquest and continued more rapidly thereafter; there was an expanding trade between English towns and the Continent, especially after the Crusades. During the

twelfth and thirteenth centuries there were increasing numbers of free tenants on the manors, and in the towns free citizenship (the status of the burgesses) was developing rapidly. All these changes had been in progress even since the tenth century, and indeed the development of the merchant gild and then of the craft gild illustrates the trend towards greater division of labor that accompanied the slow but nevertheless important expansion that was occurring. Yet the change was so slow as to be imperceptible, say, to a single generation. In contrast, a period of even ten years in the twentieth century witnesses vast economic and social changes.

And so it is in a relative sense that the Middle Ages are called static, and not in the sense that there was no change or that there were no important developments taking place. At an early date free tenants had largely arranged for payments of their feudal dues in money. By the end of the first half of the fourteenth century, and earlier in some parts of England, villeins also were beginning to arrange for money payments to the lord in lieu of customary services. In addition, as will be shown later, the lords of the manor already had begun to enclose their domains in a movement to break up the old three-field system of agriculture. The process of change was greatly accelerated by the effects of a devastating plague, now called the Black Death.

THE BLACK DEATH OF 1348-1351

The Black Death was an extremely violent epidemic attack of the bubonic plague. The source is in dispute,

but its course is certain. It appeared in 1346 at the port of Caffa, a trading center on the Black Sea; and soon thereafter Constantinople was affected. That city was a great entrepôt, and merchants going out to other parts of Europe carried the plague with them. The disease finally reached England in 1348. When it broke out in a community, it raged with appalling virulence, commonly bringing death within a day or two after it had been contracted. The mortality was terrific. Although the death rate varied greatly from one community to another, it has been estimated that one third of the entire population of England perished.

Such a change in population could not fail to bring changes in the way of living. A relatively static community was suddenly disorganized, and all the hardships of rapid change in economic and social life were experienced. Citizens who knew not what the morrow would bring grew "wanton in their ways, careless of all business and of everything." There was a general let-down in moral and religious standards, and constituted authority thereby suffered a severe shock. Instead of thanking God for deliverance, as some of the clergy expected, the survivors abandoned all restraints.

Economically, one of the first and most noticeable effects was the change in prices, particularly in wages paid for labor. Custom had heretofore been the chief factor in the determination of wages but when the number of workers was so greatly reduced, the sanctions of custom soon broke down in the face of economic forces. Wages rose from fifty to one hundred per cent, and the prices of many commodities also in-

creased. The evidence is not clear, but it is probable, because of the scarcity of labor, that commodities requiring a large amount of labor, such as clothing or fish, became especially scarce relative to the demand. Therefore, their prices rose considerably. On the other hand, food products such as meat or vegetables, and products like raw wool, that required a relatively small amount of labor, and whose supply was dependent more upon the existing agricultural "plant" and equipment, continued to be produced in comparative plenty. The supply of such products did not decline so greatly relative to the demand, and consequently their prices did not rise so high. Indeed, the supply of some commodities became greater relative to demand, and their prices declined.

Effect on Classes and Incomes. The effect of the Black Death on the quantity of labor on a manor was of vast importance to the manorial lord, because it greatly affected his income. If the death rate had been normal or only slightly above normal, the lord no doubt would have benefited, because he would have received more income from dues that were paid at the death of a villein and upon the transfer of the villein's property to his heirs. Moreover, if there were no heirs, the land escheated to the lord, thus increasing the size of his domain, and hence the income from its cultivation. On the other hand, the Black Death so decimated the available number of villeins that the lord found it difficult to obtain the customary labor services for his domain. In addition, his monopolies of the mill and the bakeshop produced less and less income as his

tenants died; and the fees and fines received from his courts were reduced, for there were far fewer people to pay them. For the same reason the lord's customary money receipts were less. When he needed to hire labor to work the domain or to serve at the manor, he found his expenses sharply increased, for to get workers he had to meet their wage demands. Finally, there was an increase in the prices of practically all commodities the lord had to buy. Thus the lord of the manor was undoubtedly the chief pecuniary sufferer from the immediate changes brought by the Black Death.

The other classes on the manor suffered too, but in some respects their economic status was probably improved. By threatening to move elsewhere, the freeholders found that they could force reductions in the former rents of the land they then held, or of any land they wished to add to their holdings. Land was plentiful relative to the demand for it, and the rents and land values were reduced. However, when the freeholder hired workers, he found himself faced with the same high labor costs as did the lord. The villeins, as will be seen later, were better able to commute their labor services to a money payment and if the lord insisted that they perform their customary work or refused commutation, they could move to another manor where the landlord would receive them on better terms. They could also move into a near-by town, or even become agricultural laborers without landholdings. Generally, however, it was the cotters (the wage earners even before the plague) who benefited most, for they were

distinctly favored by the scarcity of labor and the consequent rise in its price.

Statutes of Laborers. Even while the pestilence was still raging, however, governments all over Europe sought to check the rise in wages. In England the king first issued a proclamation declaring that the wages paid to laborers should not be more than they had been the year before the pestilence. Sheriffs and town officials were to enforce this proclamation, and if any worker refused to accept the proffered wage, he was to be put in prison. Furthermore, no lord of a manor could hold an excess number of workers merely because the plague had treated his manor more kindly. The first duty of the worker was still to his customary lord, but when the lord's requirements were satisfied, a neighboring lord, if he needed the services of the villeins and cotters of another manor, had a right to them.

In 1351 when Parliament met and it was found that the proclamation had not been obeyed, the first Statute of Laborers was enacted. This law, which codified much of the proclamation of King Edward III, required that all men must accept work when offered to them, and required that all persons affected must swear yearly that they had obeyed the provisions of the law. Imprisonment, branding, and a session in the stocks were among the penalties provided for breaking the law. Parliament represented the landed employing class, which felt that the laborers were merely taking advantage of a national calamity to change the well-established customary rates, and therefore laws were be-

lieved necessary to maintain the medieval idea of justice.

THE PEASANTS' REVOLT OF 1381

Despite the severe punishments to be inflicted, not only upon the workers who refused the customary payment but also upon the officials who were charged with the enforcement of the law, it evidently was not enforced. This is indicated by the fact that the Statute of Laborers was re-enacted with slight variations thirteen times during the century after the first proclamation by the king. The lords required labor and they bid among themselves for it. The large demand and the limited supply forced an increase in the price that even the harshest laws could not entirely prevent. The extent of enforcement varied greatly among different districts, and the seeming injustice of these measures was probably to some extent responsible for the uprising of the peasants in 1381, although other factors contributed to the revolt.

The peasants were eager to gain further freedom from the restraints of the manorial system. A great revival of interest in learning was beginning, and preachers and teachers traveling about the countryside—often referred to as the Lollards—urged religious reform and the abolition of the old shackles of serfdom. In addition, the central government was not affording to the people the protection that was the accepted *quid pro quo* for their many feudal dues. The war against France had been a failure, and French pirates even razed and burned many coastal towns. Corruption of

the court was prevalent. And to top it all, the government proceeded to introduce a new tax—a poll tax of fourpence a head. At first this tax was the same for every person in the kingdom and so was extremely regressive; that is, it bore more heavily upon those least able to pay. A second and third tax were graduated according to the rank of the payer, but this did not relieve the burden on those who, because they had no property, had never before been required to pay any tax. Any new tax is unpopular, and this new poll tax was no exception.

The revolt was marked by riots and bloodshed throughout the kingdom. The rolls of the manor courts were particularly marked for destruction, since these contained the records of the burdens and payments of the various villagers. True, those same rolls also recorded the customary holdings of land and the rights of succession to it, but at that time land was so easy to obtain that there was no fear of being driven off it. The rioters marched on London, cowed the authorities, and obtained from them charters that abolished many of the feudal dues and customs. With these charters the peasants returned home, but after their departure a few leaders remaining in London were killed or expelled, and Parliament proceeded to rescind all that had been granted. None of the results appears on the surface to have been permanent, yet the underlying changes of which the peasants' rebellion was but an outward manifestation continued—that slow evolution that eventually was to bring the feudal system to an end.

COMMUTATION OF SERVICES

One of these changes was the commutation of required labor services into money payments. As has been noted, this process had been going on slowly for many decades preceding the plague, but progress had been slow. During the fourteenth and fifteenth centuries and especially after the Black Death, several factors facilitated the change from what is sometimes called a "natural economy" to a "money economy." One of the requisites for the substitution of money payments for payments in labor and in kind was that there be enough money in circulation to enable the villeins to pay the lord for reducing their burdens. When one third to one half of the population died, there was considerably more coin per capita; also the population became more mobile, and the use of money, even in the outlying country districts, became more common.

One of the conditions favoring the change was the willingness of the lord to commute services because of the fear that he would lose his tenants if he refused to do so. Another condition prerequisite to the extensive commutation of service was an increase in the number of agricultural laborers who could be hired by the lord to perform the labor services formerly rendered by the serfs. Such a growing body of laborers, consisting mainly of former cotters and villeins who were fugitives from their traditional manors, appeared in the years following the Black Death. An additional requirement was that laborers working for money

wages would be able to obtain the goods necessary for existence instead of being forced to produce nearly all of these by their own labor. Although the workers remained partially self-sufficient, the expanding market was making possible the purchase of necessities and the further development of specialization and division of labor.

Within the century following the Black Death, the commutation of labor services to money payments was practically completed. The results of this new development were varied. The lord probably benefited, for now he would hire labor only when needed. On the whole the free labor that he could secure was more efficient than had been the forced labor of the medieval manor. The serfs also benefited. Though technically still bound to the soil the villein, in paying a money rent, more nearly resembled a freeman. He could work on his own land, especially in the busy season of planting and harvesting. The new system in all probability resulted in greater productivity per capita, for both the lord and the villein were producing in part for a broader market and for profits. To obtain larger profits they practiced more specialization in production.

THE DISCONTINUANCE OF DOMAIN FARMING

Another important change marking the disintegration of the medieval system of agriculture was the growing practice on the part of the lords of abandoning their domain farming. For centuries the lord of the manor or his bailiff had directed the farming in-

dustry of England. During the latter half of the fourteenth century and particularly during the fifteenth century, the lords increasingly rented their lands and stock to tenant farmers.

There were several factors contributing to this development. The commutation of labor services following the Black Death had given the former villeins time to cultivate more land for themselves. The gradually increasing markets made possible greater specialization and led to an increased demand for land by these independent farmers. On the other hand, the lord, because of circumstances, was glad to rent to them. One of these circumstances was the difficulty the lord had in cultivating his holdings, because of the relative scarcity of labor. Another condition leading to the decline in domain farming was the growth of a monetary economy. Though even in earlier days he had received some monetary income from the sale of crops, the lord formerly had been obliged to take most of his income in kind. Now with the increased use of money he could receive his total income in currency and need no longer remain on his estate to consume his income in kind. Thus, the lord's movement away from the land was hastened because the scarcity of labor had made domain farming often difficult, and because the widening markets made it possible for him to purchase his necessities.

As a result the lords became less interested in the labor supply of the manor, and the breaking of the ties of serfdom did not cause them much concern. In general, the lords ceased, for the time being, to be enter-

prisers and became merely receivers of rent in monetary payments for the use of their land and stock. At first the tenants, former bailiffs or freemen, were men without much capital, and they needed the cattle and the tools and equipment that were already on the manor. Gradually, as the tenant accumulated enough capital to own his tools and equipment, the present system of tenant farming, under which only the land is rented, evolved. These farms were leased for a term of years but were usually let again to the same or other tenants. In other words, the lord rented his land as long as he pleased, and in the hectic centuries following the Black Death it was distinctly to his advantage not to break the continuity of the lease. As long as agricultural production and methods remained substantially the same as before the plague, the farming population of the manor thus found its services in demand to work the land, enjoying thereby a considerable degree of economic security.

THE ENCLOSURE MOVEMENT

By the end of the fifteenth century, however, important changes were taking place, because the system of agriculture was changing. Sheep raising was extensively displacing general agriculture. General farming had continued to be rather uneconomical because of the high price of labor, and a relatively large quantity of labor was necessary for the cultivation of the soil in crops. There had been few changes in agricultural methods, for the crude agriculture was about the same as it had been for three or four hundred years. In fact

the productivity per acre appeared to be declining. On the other hand, there were many inducements to engage in sheep farming. Prices of wool were rising as a result of expanding markets, and the foreign demand for wool, which had always been considerable, was beginning to be augmented by an increasing domestic demand.¹ Furthermore, the amount of labor necessary for sheep raising was considerably less than that needed for cultivation, so that labor costs were of less importance.

But sheep raising was difficult, if not impossible, with the open-field system that still generally prevailed. Unless guarded by a large number of shepherds the sheep would wander off, or destroy the crops of others. For this reason much of the manorial land was enclosed by hedges of the type that separate English fields today. This process became so widespread it was called the "enclosure movement" and greatly affected the economic and social life of the English people. The enclosing of land was not entirely a new thing. During the fifteenth century, many manors had been enclosed by agreement among the peasants after they became aware that farming scattered strips was uneconomic. Also numerous large landholders had enclosed their domains, the better to carry on general agriculture.

Effects of the Enclosure Movement. When only the domain of the lord was enclosed for sheep raising, the people were not greatly injured, except that some unemployment resulted when two or three shepherds

¹ See above, p. 52, and below, pp. 97-100.

replaced perhaps twenty farm hands. Sometimes, however, the waste and common lands were also enclosed, and this was a serious matter to the inhabitants. On these common lands they had been accustomed to turn their cattle and hogs. When deprived of these rights, they were frequently unable to maintain themselves, and so were forced to give up their cultivated land.

Often the open fields themselves were enclosed for sheep-raising purposes. Those who held such land on lease could be evicted upon the termination of the lease. Copyholders held land as indicated on the copy rolls of the manorial courts. Many copyholders possessed their land only for life and some only at the will of the lord, while a few had the right to bequeath their land to their descendants. Copyholders were evicted whenever possible, and the process was easier after many of the manor records were burned at the time of the Peasants' Revolt. Thus the changes in the economic conditions of the country in the sixteenth century brought insecurity to the former serfs, who for a number of years after the Black Death had been able by economic pressure to obtain increasingly better conditions for themselves. In some parts of England whole villages were depopulated, many inhabitants becoming beggars and robbers or going to the towns. Fortunately the increase in wool manufacturing absorbed a number of the displaced workers, but conditions were none the less hard for those who lost their homes.

The evicted farmers tried to prevent enclosures; they

rioted and destroyed the hedges, but to no avail. The government also intervened. Laws were passed regulating the number of sheep any sheep owner could hold, but a person could always list the ownership of his excess sheep with the other members of his family. It was made illegal to enclose land for pasture unless a specified amount of land was kept for wheat growing. But the lords were usually able to prove that the land was no longer fit for tillage and were therefore allowed to turn it back to pasture. In other words, the acts to prevent the enclosures were on the whole unsuccessful, although probably they moderated the process.

During this period of enclosures, which extended in its entirety from about 1400 to 1650, approximately half a million acres were enclosed.² This was a very small part of the potential arable lands of England, to be sure, but the number of people affected was comparatively large and their hardship was very real.

THE EXTENSION OF AGRICULTURE

In the first half of the seventeenth century the enclosure movement diminished in intensity because general agriculture once more became profitable. During the preceding hundred years the population of England had been growing and the demand for grain was increasing. The subsequent increase in price made it profitable again for farmers to raise wheat. Moreover, the population growth so increased the demand for

² Fussell, G. E., "Farming Methods in the Early Stuart Period", *Journal of Modern History*, Vol. VII (1935), p. 5

general agricultural products that it became profitable to bring into cultivation a considerable amount of waste land. The drainage of the extensive fens or marshes had been started in Roman times, and now with the help of Dutch engineers the work was resumed on a large scale.

Most of the improvements in farming that became so popular during the next two centuries were known and used by some agriculturalists in the latter part of the seventeenth century. The introduction of grass crops like clover, and particularly the introduction of the turnip as a source for winter cattle food, had taken place by 1650. The people of the Low Countries on the Continent knew of these improvements even earlier, and many English farmers had heard of them, but the resistance to change was very great. Certainly in individual cases the progress in agriculture had been marked, but by and large the general level of farming was low, and agriculture did not differ much from what it had been before the enclosures. At the end of the seventeenth century the greatest "need of English farming was the leadership of practical men possessed of the leisure, the education, and the capital, to test by experiments the value of a mass of theoretical advice, to adopt new crops, introduce new methods, improve the live-stock of the country."⁸ It was not until a later date, however, that pioneers began to lift English farming much above the mediocrity of the Middle Ages.

⁸ Prothero, R. W. (Lord Ernle), *English Farming: Past and Present* (1919), pp. 139-140

SUMMARY

Rural England of 1750 differed greatly from that of 1350. Perhaps the most fundamental change was the gradual decay and disappearance of the old subsistence farming. The self-sufficient manor was no longer to be found, and the old class lines of medieval agricultural life were gone. The lord still owned the land but, with the commutation of services into a money rent, he was enabled to live where he chose. The old status of serf disappeared as the peasants either became tenants or agricultural laborers or else migrated to the towns.

The earlier three-field system of agriculture was gradually disappearing, for with the development of markets for farm products, the peasants themselves began to specialize in the production of crops. Individual initiative and specialization were hardly possible under a system that bound the individual to the customary array and rotation of crops. Therefore, as early as the fourteenth century, holdings of land were being consolidated by interchange of claims. This movement was particularly noticeable in those counties near the coast, where the inhabitants had easy access to markets. Somewhat later the enclosure movement for sheep raising brought with it further economic and social changes. This new system of agriculture marked a distinct technical advance, for it fostered further division of labor and the beginnings of capitalistic farming.

But the lot of the former peasants was not a happy one. They were forced from the land, and the land-

lord reaped the profit from the change to the new system. There was no economic reason why the customary tenants could not have supplied the growing demand for cheap wool, provided they could have enclosed sufficient land for the purpose; but the landlords had the legal right to take over most of the land, and the tenants had nothing to cushion their fall. The customs of the Middle Ages no longer protected them, and government protection of their interests was far from adequate.

However hard the change, the effect undoubtedly was to make possible a higher standard of living, though perhaps at the cost of lessened economic security. Custom no longer ruled; competition had become more of a regulatory force. A monetary economy with all its economic advantages had displaced the earlier natural economy. Production was being carried on with greater division of labor, bringing to the country more goods and services for all.

CHAPTER VI

Industry

IN industry the period of economic nationalism was marked by the gradual decay of the gild system, and the emergence of the domestic, or putting-out, system of manufacturing. This same period saw the growth of nationalism at the expense of the local town economy of medieval England. The central government in England had, even during the Middle Ages, been of considerably more importance than had the central governments of Continental Europe; but, as has been shown in earlier chapters, even in England the towns were so autonomous that a citizen of another English town was considered a foreigner.

DECAY OF THE GILDS

Internal Factors. Among the many factors leading to the decay of the gilds were a number that arose within the gild itself. In the earlier days of the gild system, an artisan normally became first an apprentice, then a journeyman, and usually a master, but what-

ever his position, he always belonged to the same group and had interests identical to those of other members of that group. However, with the passing of time, the masters became more exclusive and deliberately tried to keep journeymen from becoming masters. This they accomplished by requiring excessively high entrance fees and by extracting promises not to establish independent shops upon completing the term of apprenticeship. Probably, too, there were many journeymen who lacked sufficient capital or ambition to become master craftsmen, particularly with the increase in the scale of production that accompanied the expanding markets.

An increasing number of journeymen remained outside the guilds as permanent wage earners, with little hope of ever becoming enterprisers. Probably because these workers were accustomed to an organized economic existence, they established separate journeymen guilds for themselves. As there is some evidence that these journeymen guilds bargained collectively with the masters concerning hours, wages, and working conditions, they, rather than the earlier inclusive guilds, were the forerunners of the modern trade union. As in present labor organizations, members of the journeymen's guilds had become a permanent wage-earning class, with interests in many ways different from those of their employers.

Internal dissension was also brewing among the masters. The earlier democratic organization of the guild, in which each member had the same standing as every other member, began to disappear, and sepa-

rate factions developed. Those members wealthy enough to afford the expensive dress clothes and ceremonial regalia became known as members "of the livery", while less opulent masters were relegated to a lower status. This increasing exclusiveness of the guilds no doubt hastened their downfall. When they became very expensive organizations excluding many excellent workers from membership, they thereby placed a premium on remaining outside the guild, and thus lost their power to control all workers in the industry. Moreover, complete control of all craftsmen became more difficult after the enclosure movement had caused such a migration of workers to the towns.

Still another cause of decay was the gradual disappearance of the early guild ideal. During its period of greatest strength, the guild had tried to protect the consumer. Guild rules sought to exclude poor workers, to insure honest weight and excellent material, and in every way to give the consumer a good product at a fair price. But with the development of more extensive markets, production increasingly was for unknown consumers, for whom guildsmen had less concern. By preventing potential workers from producing, guildsmen could exact higher prices for their services. Products from other towns were excluded, not because the guildsmen feared poor goods, but because they feared price competition.

External Factors. The attitude of the national government was among the important external factors leading to the decay of the guilds. In carrying out their important religious functions the guilds had accumu-

lated a considerable amount of property. During the Reformation, early in the sixteenth century, the national government seized all the gild land and other property previously used for religious purposes. With this transfer to the government of a considerable portion of their wealth, their religious function practically disappeared; this eliminated a very influential factor in binding members to the gilds.

By far the major external factor that weakened the position of the gilds was the decline in their importance as a system of manufacturing. The market for English textiles had been constantly increasing, and by the end of the sixteenth century English woolen goods were enjoying an ever-increasing popularity in France, Spain, and Portugal, and were even being exported to Brazil. During the seventeenth and eighteenth centuries the markets were further extended, and English woolens and cottons were to be found covering the savages of Africa and America as well as the aristocrats and peasants of Europe. To supply those distant markets with large quantities of goods at low prices, the monopolistic gild members were at a distinct disadvantage in competition with the unregulated handicraftsmen outside the gild's jurisdiction.

DOMESTIC SYSTEM

Origins. For many years, because of the increasing exclusiveness of the gilds, trained craftsmen had established small workshops in the rural districts near the towns and cities. Because it destroyed their monopoly, the gilds had opposed this movement; but,

despite the fact that the town and national governments supported the guilds in their opposition, the change could not be halted. The number of independent workers, particularly in the cloth-making industry, rapidly increased.

At first these independent operators worked in their own homes, used their own looms, worked on their own material, and when the cloth was completed, carried it to a near-by market town. Such a worker might depend upon his family for assistance, or, like the guild member, he might hire journeymen and apprentices. Essentially, however, this man was an independent or "free" enterpriser, deciding what and when to produce, and selling his goods in a general market in competition with other small enterprisers. Under such an industrial system the merchant who bought the goods was a middleman, who purchased small quantities from each producer, assembled the goods to fill large orders, and sold in domestic and foreign markets. Numerous merchants, dissatisfied with the uneven flow of goods that resulted from such haphazard production, began to organize this type of industry through exercising some control over the manufacture of the product. These men came to be called merchant-capitalists, or, in the cloth industry where they were most numerous, merchant-clothiers or simply clothiers.

Organization. This new organization of industry was called the domestic putting-out system. Under it weavers and spinners, as well as craftsmen in other industries, worked in their own homes, used their own

tools and even hired helpers, though often the work was of a family nature. They usually lived in rural sections and combined farming with their manufacturing. In the cloth industry the merchant-clothier frequently supplied the yarn and contracted with the weaver for cloth of a certain size. When the employer received the finished cloth he paid the weaver for his labor. At first spinners were accustomed to furnish their own raw materials, but as the cotton industry developed, they too were frequently supplied by the merchant-clothier.

When first operating merely as middlemen, the merchants usually purchased the cloth already "finished" by the craftsmen, but as production expanded, the clothier bought gray cloth and then hired fullers and dyers to finish it. Such specialization caused the cloth to be uniformly prepared in large quantities at lower cost. Finally, when the industry became well organized, the merchant-capitalist furnished raw wool to spinners, delivered yarn to weavers, collected the gray cloth and had it finished in his own establishment. Thus, as compared with the guild handicraft system, the domestic putting-out system represents, to a marked degree, an extension of individual occupational division of labor.

In some instances, where the craftsmen were more independent and enterprising, they undertook to manufacture for the market at their own risk instead of hiring themselves to the merchant-capitalist to work on materials owned by the merchant. In this case the merchants frequently advanced raw materials on

credit. For example, the House of Chetham, merchant-capitalists of Manchester, advanced raw cotton and linen yarn to artisans on terms of from three to six months. In this way the producer frequently became heavily indebted to the capitalists. Subsequently, these domestic workers became more dependent upon the merchant-capitalists, who not only advanced raw materials on credit but also became the principal buyer of their finished goods.

Development of Central Shops. At first looms and other machinery used in domestic production belonged to the workers, though sometimes the weaver, for instance, would rent his machine from the merchant-capitalist. Toward the end of the domestic putting-out system, just before the advent of the Industrial Revolution, a slight variation occurred that was in reality an introductory step to the factory system.

The plan of employing craftsmen to work in their own homes was never entirely satisfactory to the merchants because they had little control over the output of the workers. It was difficult to estimate cloth production in advance, for some of the workers might decide to take a vacation. In order to overcome these obvious faults in the system, some of the more enterprising merchants brought together, under one roof and under one supervision, a number of their scattered workers. This tendency was especially apparent toward the latter part of the seventeenth century after the so-called "Dutch loom" or "engine loom", had been introduced into England. This complicated and expensive piece of machinery, which could weave a number

of small pieces at the same time, was usually too large to be installed in a worker's cottage.

THE WORKER UNDER THE DOMESTIC SYSTEM

The immediate position of the workers was not improved by the transition from the gild to the domestic system. Merchants, competing one with another to obtain the highest profit, necessarily reduced the costs of production as much as possible. The merchant, who had become practically an employer, was tempted by his situation "to be proud and overbearing, to consider his people as the scum of the earth, whom he has a right to squeeze whenever he can, because they ought to be kept low and not to rise up in competition with their superiors." On the other hand the workers, for the most part, "deprived of the hopes of advancing themselves to the same degree" as their employers, realized that their interests were different. Holding such an idea, they thought "it no crime to get as much wages and to do as little for it as they possibly can, to lie and cheat and to do any other bad thing, provided it is only against their master, whom they look upon as their common enemy, with whom no faith is to be kept."¹

In other words, the development of capitalistic manufacturing, with production for distant competing markets, had changed the master-servant relationship of

¹ Tucker, Josiah, *Instructions for Travellers* (1757), pp. 24-25. Quoted from Wadsworth, A. P. and Mann, Julia De L., *The Cotton Trade and Industrial Lancashire 1600-1780* (1931), p. 385.

the gild system. True, class lines were not sharply drawn. Though some of the more ambitious and able workers could, and did, rise from the ranks of the permanent wage-earning class, contemporary literature constantly referred to the employees as "the manufacturing poor." Their poverty was blamed upon many circumstances. It was said that the domestic workers spent too little time at work and too much at the taverns. They were called idle, extravagant, debauched, and bad domestic managers, and, though they received rather low wages, they were criticized for not being sufficiently provident to save for periods of sickness and distress.

The belief was widely held at the time that low wages and poverty were essential spurs to industry, or as Arthur Young, a famous economic writer of the time, expressed it, "Everyone but an idiot knows that the lower classes must be kept poor or they will never be industrious." Apparently it was believed that if in three days a man could earn enough to keep body and soul together, he would not work the other three days of the working week. Probably there was a considerable amount of loafing in the undisciplined home workshop, and probably higher wages could be earned for better work. Production, however, was understandably intermittent when near-by friends might be engaged in the more interesting pastimes of watching bull-baiting, cock-fighting, or "pitched fights between naked men shod in iron-tipped clogs." Manufacturers might well have wished for fewer interruptions in production.

Yet the economic reasons for the growing differences

between employers and employees are not hard to find. The two groups were seeking apparently opposite purposes. To compete with producers in England or in other countries, merchants wanted greater production at low costs, which to them meant low wages for steady work. The workers, on the other hand, were interested in higher wages and shorter hours. Comparatively late in the history of the domestic system, workers in various industries began to combine for the purpose of bargaining collectively with their employers. These trade unions of the late seventeenth and early eighteenth centuries evidently were designed originally to regulate entrance to the trade by the enforcement of apprentice rules. Soon they had extended their aims and were seeking working rules and the exclusion of non-members from employment (the "closed shop"). Eventually they also tried to obtain wage increases, but were constantly deterred by the laws against combination. Of course these early unions differed in many respects from the militant combinations of nineteenth-century workers, but there are many threads connecting the two movements.

Child labor was a curse of the domestic system, as it has been the curse of other systems since. Children, it was believed, could well add to the national riches and, furthermore, if they learned to work constantly when young they would continue to do so as they became older. A few parishes successfully established work-houses for their poor children; other children at as early as seven years of age were bound out to craftsmen to work twelve hours a day at an initial wage of a shilling a week.

THE STATE AND THE DOMESTIC SYSTEM

The national government had to meet the problem of controlling this rapidly growing putting-out system. The weakening of the power of the guilds and the increasing control by the government over all phases of economic life made this intervention inevitable.

Statute of Apprentices. The most famous of the national regulatory laws was the Statute of Apprentices, passed in 1563 during the reign of Queen Elizabeth. In this law the government undertook to make labor compulsory for all craftsmen, to set wage rates for each type of worker, to determine the rules of apprenticeship, to establish the length of the working day, and to provide for yearly labor contracts. The fixing of the actual rate of wages was to be undertaken by local justices of the peace.

This statute provoked warm controversy. As set forth in its preamble, the purpose of the law was to enable every man to receive what might be termed a "living wage." The rise in prices that occurred just previous to Elizabeth's reign no doubt necessitated some adjustment of wages. Furthermore, this law set no maximum wage, as had the previous statutes of laborers, so that, if they would, the justices who administered the law could provide for a fair wage. On the other hand, the law was passed by a Parliament representing landowners and employers of labor. As one writer has said:²

² Gibbins, H. de B., *Industry in England* (1926), p. 254

"After all, the object of this statute was the same as that of the older ones, namely, to give fixity to wages; and it is so unusual to find one class legislating in favour of another without some adequate motive that one cannot help thinking that there was something behind all this generosity. Nor is the motive far to seek. It was to place the regulation of wages not merely in the hands of Parliament whose methods were necessarily slow and cumbersome, but in the hands of the employers of labour, or at least in the hands of a class who would sympathise with employers."

Whether of benefit or injury to working people, this law marks a distinct step in national regulation of wages, hours, and working conditions. It remained on the statute books until 1813, by which time the Industrial Revolution had produced so many changed conditions that it was no longer effective.

SIGNIFICANCE OF THE DOMESTIC SYSTEM

The domestic putting-out system of manufacture was no ideal system. Labor was sweated, children were exploited, class distinctions emerged; but in many respects the system was advantageous to the workers. A worker possessed a large degree of independence; entrance to employment was comparatively easy, for nearly anyone could rent a loom or other tools from the merchant-capitalist. Then again, a family could work and live together while earning the group income. If this income were too small, it could be supplemented by farming the plot of land that usually surrounded the domestic worker's cottage.

Historically, the putting-out system was a step in the economic development of English industry. The expanding markets for English goods necessitated a change from the previous gild system of manufacturing. The putting-out system, operating under the direction of merchant-capitalists, was able to provide the needed goods. Because it was economically more effective, it easily supplanted the old gild system. In turn, it too was soon displaced by the factory system in those industries in which still more centrally organized production was economic.

C H A P T E R V I I

Trade and Commerce

DOMESTIC TRADE

THE developments in agricultural and industrial methods during the period of nationalism (1450-1750) were equaled in importance by the changes that took place in other aspects of economic life. Trade and commerce, for instance, expanded greatly under the patronage of the paternalistic governments of the Tudors and the Stuarts, and financial institutions likewise considerably developed.

During the period of nationalism the internal trade of England was conducted in part through the same channels as formerly. The weekly markets remained important agencies for food distribution, and with the development of the domestic system of manufacturing they assumed an added significance as centers in which small manufacturers could sell their finished products. Many of the great fairs also survived the Middle Ages, drawing people from greater distances and offering them goods collected from a wider area.

Peddling, another institution remaining from an earlier period, was an important factor in the local distribution of goods. A peddler was an itinerant merchant who, at some wholesale market, would purchase numerous commodities to sell at retail or to small shopkeepers throughout the countryside. Sometimes such merchants would sell only one type of article; others more often would have a miscellaneous pack. Tobacco, tea, coffee, sugar, and spices were customarily distributed in this manner, and even cotton cloth, small hardware, and Bohemian glass were peddled throughout England and Continental Europe.

The latter part of the period of nationalism is marked by the rapid development of general retail and specialty shops. By the beginning of the eighteenth century, continuous retail concerns existed in almost every town in the country. Contemporary observers resented this rapid increase in retail shops, which they felt was at the expense of the craftsmen who had formerly been their own salesmen.

Wholesale trade, likewise, came to be on a continuous basis. In the fifteenth century, for example, there were at Antwerp two fairs a year, but gradually as trade increased and as various barriers became less important, trade took on a more continuous nature. Better communication and transportation, and freedom for trade at all times, marked the end of the importance of the medieval fair and the beginnings of a continuous market. Indeed, contemporaries spoke of Antwerp in the sixteenth century as "a continuous fair." The process was further aided by the develop-

ment of "trading by sample", a change described in more detail below.

In wholesale trade, the auction sale was a transitional step between the occasional fair of the Middle Ages and the modern permanent trading place. These sales were conducted whenever a shipload of goods arrived and the sale had been advertised in the city. By the eighteenth century, especially in the great importing centers, the auction had become an established practice for many types of goods. The permanent fair, an institution of great importance in the field of domestic commerce, was a concomitant development. The first Royal Exchange, built in London about 1568 by Sir Thomas Gresham, was an immense building lined with shops in which merchants could maintain continuous displays.

Other simultaneous developments were the standardization of grades for various commodities and the beginnings of buying and selling under advance contracts. During the Middle Ages there had been no standard grade, and the sale of a commodity before it had been produced was frequently prohibited by law. Such rules naturally limited sales and made the transportation burdens particularly great, since even heavy goods had to be peddled from market to market. The new method of selling under advance contracts, which apparently developed rather rapidly in the seventeenth and eighteenth centuries, enabled grain and other commodities to be sold "by samples only as 'tis called." Likewise fostered by this change in method was the buying and selling of "futures", that is, the buying

and selling of a contract to deliver commodities at some future date. Thus was established the basis for systematized speculation in commodities and stocks.

FOREIGN TRADE

The greatest expansion of trade in England during the period of nationalism was in the foreign field. In fact, during the latter part of the fifteenth century there began a change in European trade and trade routes so extensive and accompanied by such a marked expansion in trade itself, that it has since been called the Commercial Revolution.

The Commercial Revolution. The importance of the trade with the East has already been indicated. The people of England were dependent upon the Venetian merchants for such exotic products as spices, wines, fine cloth, and furs. For centuries these goods had been imported from India over the old established trade routes to the Mediterranean ports, and thence by sea and land to England. Yet, at best, these routes were long and the carrying charges extremely high. This was particularly true after the Turks had gained control of eastern Asia and northern Africa.

The cumulative influence of the Renaissance from the twelfth century onward, and the more immediately stirring events of the Reformation in the sixteenth century, brought a rapid revival of learning and culture and a zeal for inquiry, exploration, and the questioning of all old-established customary rules. The Commercial Revolution was related to that intellectual and spiritual revival, both because explorers were thereby

stimulated to seek new routes, and also because the general spirit of unfettered minds, growing out of the Renaissance, revealed itself in a zeal for adventure in trade, commerce, and piracy.

During the fifteenth and sixteenth centuries, under the original inspiration of Prince Henry, Portugal took the lead in exploration. Her sailors gradually made their way down the coast of Africa, and finally, after rounding the Cape of Good Hope, Vasco da Gama reached in 1497 the distributing port of Calicut on the west coast of India. A new route to the treasures of the East had been discovered, and the former power of the Mediterranean countries began to wane. Part of this same passion for exploration led Columbus to embark on his voyages of discovery that added the Western Hemisphere to the known map of the world.

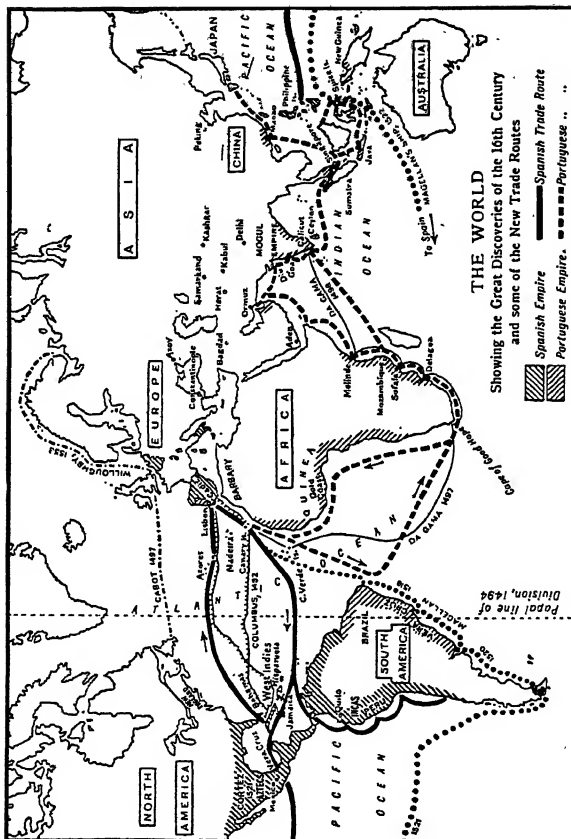
During the sixteenth century, other mariners explored the waters of North America and succeeded in circumnavigating the globe. The Commercial Revolution consisted of this transfer of trade routes to the great oceans with the consequent development of world-wide commerce. No longer was trade confined merely to inland waters or the shoreline of seas. The oceans, formerly barriers to trade, became the chief avenues of international commerce.

The results of this revolution in commerce can hardly be exaggerated. In reality, it provided a tremendous impetus toward the development of the modern complex economic system of specialization and trade. Profits from the increase in trade with new countries and continents made possible the growth of large

fortunes. Merchants began to intrude upon the landed aristocracy as the ruling classes of European nations, and all efforts were directed toward increasing the area and volume of trade. This move was generally acceptable because the economic system developed by the merchants expanded production and raised standards of living. Wider markets and increased trade enlarged the volume and variety of goods and services available to the average Englishman.

After the voyages of discovery, English commerce was greatly extended beyond these early beginnings. At first the English seamen were primarily interested in pirating the Spanish and Portuguese ships. Large fortunes were accumulated in this way, and many a pious patriot found greater profit in buccaneering and slave-trading than in more legitimate trade. Indeed, piracy in the time of Elizabeth became a "racket" so lucrative to people in high places that it was extremely difficult to eradicate. One of Sir Francis Drake's adventures paid a handsome dividend of four thousand seven hundred per cent. The fortunes thus made were soon earning more steady and possibly more honest profits from the buying and selling of goods in ordinary trade. This trade developed under organizations known as "trading companies."

Trading Companies. An examination of English foreign trade during this period must of necessity be devoted largely to a study of the great companies that exercised monopolistic powers over trade. Prior to the Commercial Revolution, the foreign trade of England had been conducted principally by foreign merchants,



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as the English were not sufficiently experienced seafarers to undertake the necessarily dangerous voyages. However, as described in Chapter III, the merchants of the staple had already begun the development of an English carrying trade across the English Channel. Even before the discovery of the new trade routes, another group that had sought to wrest the trade monopoly from the Hanseatic cities was the Company of Merchant Adventurers. This was a regulated English company, chartered in 1406, primarily interested in the cloth trade with Flanders. Unlike the Staplers "who went regularly to and fro between England and the English port of Calais", the Merchant Adventurer "voyaged far afield, east, west, north or south, wherever he could find an opening."¹ By excellent salesmanship and by selling high-grade goods at low prices, this organization gradually built up the demand for English cloth that made possible the development of the textile industry in England.

The Merchant Adventurers became increasingly exclusive and gradually raised the membership fees from 6s. 8d. to £40; but at the end of the fifteenth century the government reduced the fee to about £6. The abolition of the Steelyard in 1598 marked the successful end of a long struggle with the Hanseatic merchants for the privilege of carrying on the rich commerce with the valleys of the Elbe and the Rhine. During this time the Merchant Adventurers continually bettered their

¹ Carus-Wilson, E. M., "The Origins and Early Development of the Merchant Adventurers' Organization in London as shown in their Own Medieval Records", *Economic History Review*, Vol. IV (1933), p. 147

position and by the middle of the sixteenth century practically monopolized English foreign trade.

At that time, however, the government began to allot exclusive trading privileges in various parts of the world to different groups of merchants. The Russian or Muscovy Company, organized in 1553 to trade with Russia, was never a great financial success, for the Czar failed to keep his part of the monopolistic agreement. The Eastland Company attempted to consolidate the activities of the merchants who were trying to break the trade monopoly held by the Hansards with Norway, Sweden, and the Baltic countries. The Levant Company interloped in the Venetian trade with the Near East, and likewise disputed the claim of the Dutch and the Venetians to the remaining overland trade from the Orient. By far the most important of all English trading companies formed in this period was the British East India Company, chartered in 1600 and given a monopoly of the trade with India. This company established trading posts throughout India, had its own fleets, its own armies, and exercised practically sovereign rights in that country. It was responsible more than any other organization for bringing India into the British Empire.

These monopolistic trading rights were usually granted to encourage English trade by allowing those merchants who spent money developing a new area to receive the benefits from it. Thus, certain of the American colonies were settled by commercial companies that were granted monopolistic rights for that purpose. Interlopers were sometimes able legally to break the old

monopoly; but in the days when all Englishmen were held responsible by foreigners for any cheating or criminal acts on the part of any other Englishmen, it was probably necessary that in any one country some group be held liable for the actions of all.

FORMS OF BUSINESS ORGANIZATION

The Regulated Company. From the time of the late Middle Ages, two leading types of business enterprise had been gradually developing. The one was the so-called regulated company; the other, more satisfactory and useful, the joint-stock company. The regulated company was a loose organization of merchants who had been granted certain trade privileges. Each merchant, however, conducted his own business with his own capital and his relation to the company was limited to a compliance with the rules of the organization set forth in the charter and by-laws. However, the regulated company of Merchant Adventurers did more than merely make rules for the conduct of trade. "It actively concerned itself in the prosecution of trade . . . it was the Fellowship which chartered the ships, fixed the freights, determined when the fleet sailed, whither it went or whether it went at all."² A modern stock or produce exchange is an organization similar to the regulated company; each broker on the exchange is a private enterpriser, trading on his own capital, and to exercise the privileges of his membership in the organization he must pay the required dues and obey the rules.

² Carus-Wilson, *op. cit.*, p. 162

Other forms of business association developed first in Italy during the Middle Ages. To circumvent the rules against interest, a wealthy person would lend his capital to some merchant, thereby becoming a limited partner. Another somewhat later development was the unlimited or ordinary partnership; that is, instead of being limited in liability to the amount invested, each partner became liable for the debts of the association to the full amount of his private fortune.

The Joint-Stock Company. The second leading type of business organization developed out of the weaknesses of the others; and was similar to the present-day corporation or joint-stock company. Rather than an association of merchants, each trading with his own capital, the joint-stock company was an association of the capitals of individual members. That is, instead of each merchant furnishing his own ship and merely following the trading rules of his own company, each member of the joint-stock company would buy a share in the venture, paying for it usually in money, and thus contributing his capital to the joint venture. The management would be left to the officers elected by the shareholders. Furthermore, unlike shares in ordinary or limited partnerships, the shares of a joint-stock company were negotiable, and so could be transferred to others.

When first introduced from Italy into England, this last form was not nearly so highly developed as it later became. At first, for instance, the members of the company contributed goods instead of money to the venture. Trade was conducted with this joint stock of

goods, and the profits were shared according to the amount contributed. Gradually, however, payments of money were substituted for goods; but for a number of years after the founding of the East India Company, a person would still buy a share in each voyage rather than in the company as a continuing enterprise. The need for a permanent investment of capital finally became apparent, and thereafter a person bought stock in the company rather than in a single voyage of the company. This form of business organization is of extreme importance, for without it the commercial and manufacturing ventures of the seventeenth and following centuries could scarcely have secured sufficient capital.

Accounting and Insurance. Contributing largely to the concept of the "firm", in contrast to the organization of a group of individuals into a loose association, was the development of double-entry bookkeeping and accounting. Double-entry bookkeeping is a system of bookkeeping that records not only the changes in the assets of a business organization, but also the changes in the ownership of those assets. Such a method of bookkeeping made possible the development of the "firm" as an abstract entity apart from the owners as individual entities. This abstract view considers that the firm possesses certain assets and owes claims to the various owners or creditors of the firm.

The concept of the firm was important in the development of modern institutions, because "It reduced the gain idea to an abstraction by putting the profit in a specific form, a definite sum of money in con-

trast to the natural aim of subsistence which was in the forefront of the medieval business man's mental attitude. It was this abstraction of profit that first made the concept of capital possible."⁸ Accounting also is an Italian contribution to modern society. Pacioli, an Italian monk, published in 1494 one of the first formal texts on the subject, and so famous did he and his successors become as instructors in the art that, as late as 1830 in the United States, schools advertised courses in "Italian bookkeeping."

Insurance is another modern commercial institution that found its beginnings and substantial development in this period of commercial growth. The roots were found in medieval Italy and Germany, but the growth came after the Commercial Revolution; and it is not surprising that maritime insurance was the first to appear, for storms and pirates made sea trade very hazardous. At first, individuals with surplus capital would occasionally guarantee, at a price, the value of a ship and cargo. Gradually this underwriting, as it is called, was undertaken by firms or companies. The first English statute on insurance was enacted in 1601, and the firm as a form of organization for insuring appeared in England about a hundred years later.

ENGLISH COMMERCIAL SUPREMACY

The Dutch were the bitterest rivals of the new English commercial interests. The Dutch East India Company, organized in 1602, was a serious competitor of the

⁸ Nussbaum, F. L., *A History of the Economic Institutions of Modern Europe* (1933), p. 160

British East India Company, and Dutch merchants were also interlopers in the Russian and the Levant trade. In addition, the Dutch settled in North America about the same time that the English were planting colonies there. Wars were the natural outcome of these conflicts of interest. At first, Holland was able to hold her own, but, being a smaller state, she was less able to maintain her naval power. By the end of the seventeenth century Holland had retired from the struggle, still holding large possessions in the East Indies, but leaving the Western Hemisphere to France and England.

Though most of the exploration and colonization was carried on by private enterprise, the English government rendered great assistance. Laws were passed to encourage English shipping by granting it monopolies in the carrying trade, paying bounties to shipbuilders, and preparing navigation surveys of domestic and colonial waters. By the eve of the Industrial Revolution, many other measures, discussed in a later chapter on mercantilism, had helped to make England the most important commercial nation of the time.

Colonial Commerce. The American colonies rapidly became a source of wealth to England, for many products grown here were of great importance to the mother country, and in addition the colonies were an excellent market for British manufactured products. Each section of the colonies tended to specialize in those products it could best produce, or in which it had the greatest advantage over other sections of the country. The South's main products were tobacco, rice, and

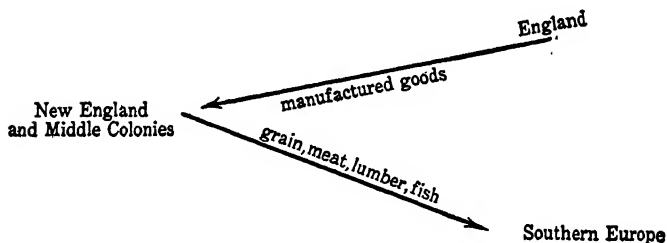
naval stores; the central colonies produced grains and meats; and New England was famous for its fisheries, rum, and ships.

Imports from the colonies consisted almost entirely of extractive products from the sea, forest, and farm. The furs, fish, lumber, tobacco, ships, wheat, and meat, which were advantageously produced in the colonies, were welcomed in England. Exports to the colonies consisted principally of English manufactured goods such as cotton and woolen cloth, and the transshipment from England of such products as spices, tea, wines, and brandies. Though homemade clothing, shoes, and hats might suffice the frontiersman, the southern planter and the northern merchant bought the finer products of England and the Continent.

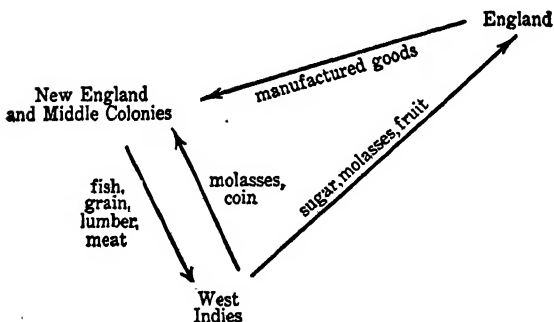
Triangular Trade. An interesting aspect of colonial commerce was the famous triangular trade that developed as a method of balancing exports against imports. In some years the exports from England to the northern colonies were as much as eight times its imports from those colonies; whereas the southern colonists usually bought from the mother country about the same amount as they sold. The British West Indies exported to England about three times as much as they imported from there. The unfavorable trade balance of the northern colonies with England was settled largely through the medium of triangular trade; that is, the northern colonies paid for their imports from England by their exports to the West Indies and to the countries of southern Europe from which the colonists' imports were relatively small.

The northern colonists, particularly the New Englanders, sent meat, grain, lumber, and dried fish to

Triangular Trade I



Triangular Trade II



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southern Europe. Having unloaded those products, the merchant returned to England with a cargo of wine and fruit, which was exchanged for manufactured goods for the colonists.

Another system of triangular trade which was very important arose in connection with the West Indian trade. Fish, grain, lumber, and meat were sent by northern colonists to the West Indies and exchanged for sugar, molasses, and other products. Some of these products were carried to England and traded for manufactured goods for the return voyage to New England.

With each shipowner seeking profitable cargoes in this manner, trade was financed through the credits that the northern colonists built up in the West Indies by shipping more there than they received from them, and through the credits that the West Indies built up in England. Thus, the American credits in the West Indies were used to cancel the American debits in England. This very lucrative trade marked the foundation of many of the New England fortunes later devoted to shipbuilding and to cotton textile manufacturing.

SUMMARY

The period of economic nationalism may be characterized as one primarily of expansion resulting from the changes in trade routes following the sixteenth-century explorations. The changes that took place were closely associated with the accompanying expansion of trading areas and the increased production under the domestic system of manufactures. In retail trade, as the volume and variety of goods increased, peddling gave way in the more densely populated sections to retail stores. In wholesale trade, two fundamentally important changes were the creation of permanent whole-

sale trading establishments in place of the earlier occasional fairs, and the adoption of the practice of standardizing goods so that they could be sold by sample in the wholesale trade.

This expansion manifested itself more dramatically in the development of the foreign trade of England which, during the period, rose to its pre-eminent position of world empire. In connection with this rapid growth in foreign trade with the Far East, with southern Europe, and with the American colonies, there developed a new type of business organization destined to have even greater importance in the period to follow. This was the joint-stock company that made possible the assembly of many small contributions of capital into one large sum for undertaking these great merchandising ventures of the period.

CHAPTER VIII

Finance

THE slow growth during the Middle Ages of a system of money, credit, and banking has been traced in a previous chapter. By the beginning of the nationalistic period, elementary monetary systems had developed, trade was being conducted on a credit basis, and rudimentary forms of banking were in existence. During the centuries from 1450 to 1750 the methods of coinage were greatly improved, new credit instruments and institutions arose, banks appeared, and banking methods developed. The present chapter deals with the significance of these further developments of financial institutions that occurred during the period of nationalism. This will be done by analyzing the historical material under the topics (1) money and prices, (2) the development of banking, and (3) the capital market.

MONEY AND PRICES

The term "money" is applied to anything that is generally accepted as a medium of payment; money

therefore includes coins, bank deposits, and paper money. During this period all three of these kinds of money were undergoing fundamental changes. Moreover, it was during this period that an understanding of the relationship between money and the average level of prices began to emerge. A brief statement of this relationship is that the average level of prices rises proportionately with an increase in the quantity of money in circulation, relative to the amount of trading taking place.¹ Thus, if trade increases as rapidly as the amount of money in circulation (for example, if both increase at the same rate as population growth) the average level of prices will tend to remain the same.

During the nationalistic period several events altered drastically the quantity of money in circulation and the average level of prices. These events affected coins, paper money, and bank checks.

COINS

Coinage Debasements. During the Middle Ages the inflow of foreign coins into England, as a result of trading relations, had made essential the existence of money-changers. Though English coins normally were in a fairly sound condition, there is evidence of several debasements between 1300 and 1550. These debasements were effected by putting less and less silver into the coins and using the remaining silver to mint more coins, thus bringing an apparent immediate profit to

¹ Whenever money moves from hand to hand in trade more quickly than formerly, it has the same effect as if the quantity were increased.

the king, and also increasing the number of coins in circulation.

During the fourteenth century and most of the fifteenth such debasements were only occasional, but in the latter part of the fifteenth century and during the first half of the sixteenth century debasements of the coins were repeated several times in succession. The resulting increase in the amount of money in circulation raised prices during the first half of the sixteenth century, and further debasements were then necessary to help the king meet his rising expenses. Consequently, by the time Queen Elizabeth ascended the throne in 1558, the currency "was so discredited that the country began to retrograde towards barter, goods being often exchanged for goods, and wages paid in food."²

Increase in Bullion. Coinage debasement was the principal cause of the rise in price level in England during the first half of the sixteenth century, and was a factor also in Continental Europe at this time. However, European countries, especially Spain, were experiencing a rising price level principally because of the great influx of treasure from the mines of America. So great was the effect on prices throughout Europe that one authority speaks of it as a price revolution, the impact of which was most injurious to the wage-earning classes.³

If such a rise in prices as occurred in this period had

² Warner, G. T., *Landmarks in English Industrial History*, Eleventh Edition (1910), p. 172

³ Hamilton, E. J., *American Treasure and the Price Revolution in Spain, 1501-1650* (1934), pp. 280-281

been equal for every commodity and service, little damage would have resulted; but the price of some necessities doubled by 1550, while wages increased only thirty per cent, and even after 1550 wages rose only fifty per cent above their previous levels. Such a situation meant that many workers were not able to exist on their wages, and large numbers sank to begging and vagabondage.

Reforms of the Coinage. Upon her succession to the throne Elizabeth and her advisers, among whom was Sir Thomas Gresham, decided that the first step toward stability was the restoration of the coinage. Laws were passed that lowered the legal value of each coin in circulation to the market value of the actual silver bullion it contained. The people were then invited to turn in the old imperfect coins to the mint and receive in exchange new full-weight coins. In a comparatively short time the coined money of England became uniform instead of consisting of various kinds of coins of miscellaneous silver content, which depended upon the date of their original issue.

In Elizabeth's time silver coins were made by simply cutting the metal with shears and shaping and stamping it with a hammer. It was comparatively easy to "clip" a coin, by the process of removing a small amount of metal from the edges so that the subsequent receiver would not readily detect the defect. Under this process the coins became smaller and smaller until someone turned them in to a bank or a money-changer for export and found that by weight as bullion the coins were worth much less than their stamped

value. About 1660, however, new coins with milled edges were issued as at the present time. At first this reform resulted in the new full-weight coins being melted down for export or hoarding purposes and the old clipped coins continued to circulate, as persons tended to make their payments with the lighter coins.⁴ This problem was finally solved when Charles and his ministers issued an entirely new set of milled uniform coins at a cost of some two and a half million pounds.

But the coinage reforms failed to stabilize monetary values, because by that time the silver and gold from America had begun to find their way to England, in larger amounts than theretofore, through raids upon the Spanish fleets or in the ordinary course of trade with Spain and other Continental countries. Hence, the amount of money in circulation continued to increase, and the general level of prices to rise.

PAPER MONEY

Another important financial development in the period of nationalism was the increasing use of paper money. This came about in two forms: first, the circulation of banknotes and, second, the circulation of notes printed and issued directly by the government. The circulation of banknotes will be described in the following section of this chapter as an aspect of the development of banking.

⁴ This process is called Gresham's Law because Sir Thomas Gresham, for many years finance minister for Tudor rulers, pointed out that good money tends to be driven out of circulation by bad money, when there is an excess of money in circulation for trade needs, since the "good" money becomes more valuable as bullion than as money if the price level rises.

Government Paper Money. The earliest examples of government paper money appeared in the American colonies as one of the methods attempted to secure a satisfactory medium of exchange. As gold and silver coins were scarce, the colonists at a very early date used certain commodities as money. In some parts of the country, wampum, the money of the Indians, formed the exchange medium, and beaver skins were used frequently. In Virginia, tobacco, the chief crop of the region, was used as money. These commodities had certain of the characteristics necessary for money, such as being generally acceptable, relatively stable in value, and durable. But as they were not easily portable or divisible they had only a limited circulation, and were not conducive to ease of trade.

Later some coins made their way from the West Indies into the colonies. The coins were Spanish and Portuguese rather than English, but the money of account, that is, the money in which account books were kept and prices expressed, continued to be the English pound, shilling, and penny. This situation led to much confusion, for there were all types of Spanish and Portuguese coins of varying weights in circulation. Each time a transaction was made the foreign coins had to be evaluated in terms of English pounds.

To provide an adequate currency, various expedients were tried. In business transactions men of property frequently gave promissory notes that circulated locally as money. Several colonies enacted laws to safeguard these notes and facilitate their transfer. In 1690, to pay the soldiers engaged in an Indian war, the colony

of Massachusetts issued the first paper bills of credit. This was the first issue of government paper money in the British Empire and one of the earliest in the world. New Hampshire, Rhode Island, Connecticut, New York, and New Jersey quickly followed and issued paper currency of their own, and most of the other colonies eventually adopted the same device.

The colonial experience in the circulation of public bills of credit as paper money was generally unfortunate. The British government did what it could to prevent these issues, and the royal governors vetoed colonial acts authorizing them. But the colonial assemblies, through their control of the salaries and expenses of the royal offices, usually were successful in their efforts to bring about the issue of paper money. At first the issues were for war expenses, but some of the colonies soon issued bills merely to pay their ordinary expenses. Finally, to finance the development of some of the colonies, the bills were issued as loans to private individuals against land as security.

In the colonies where the issues were limited in quantity they did not depreciate. In the colonies that used the printing presses to issue paper money to pay expenses, the temptation to overissue led to an increased volume of money in circulation, causing the value of each piece to decline greatly. In some of these colonies the bills became almost worthless; in other instances the depreciated bills were followed by new issues called new tenors, and at one time in Massachusetts there were bills of "old tenor, middle tenor, new tenor first, new tenor second." The new bills usually took the same

downward course in value until they were repudiated in whole or in part.

Various means were employed to keep the paper money circulating at par.⁵ Taxes were levied to provide for the retirement of each issue of notes, but sometimes as long as twenty-five years had to elapse before the taxes were sufficient to retire them. Most of the notes issued were made legal tender; that is, they were declared receivable as the legal means for discharging a debt. As some citizens objected to accepting depreciated currency, a number of the colonies passed laws compelling people to sell their property at the same price for bills of credit as for silver. Severe penalties were placed on those who charged more for goods, lands, or services in bills of credit than in silver.

These colonial experiences with paper money were continued during the Revolutionary War, both by the new states and the Continental Congress. Without the former restraint exercised by the British government, disastrous results followed. However, upon the adoption of the new Constitution, the power to control the currency was bestowed upon the federal government.

DEVELOPMENT OF BANKING

By the beginning of the period of nationalism, as already pointed out in Chapter III, the private bankers of the Middle Ages had originated the elementary

⁵ Cf. Nettels, Curtis, "The Origins of Paper Money in the English Colonies", *Economic History*, Vol. III (1934), pp. 35-56.

banking practices of accepting deposits, of using and clearing checks, and of extending loans to borrowers. During the three centuries following 1450 these activities were further expanded, and two additional functions developed. These were the issuance of banknotes and the use of bank credit as money by virtue of the development of the discount-deposit function through the discount of commercial paper.

These various activities, which developed in different places and under different circumstances, were usually carried on first by private money-changers and merchants along with other commercial activities. During the period of nationalism such banking functions began to be performed by specialized financial institutions, though seldom did one institution exercise all the functions. The combining of all these activities into a single commercial bank, and the establishment of a banking system through the interrelationships of banks, came later in response to the growing needs of a rapidly expanding industry and commerce.

BANKNOTES

Bank of Sweden. The Bank of Sweden, founded in 1656, is the oldest bank now in existence. In 1661 this bank provided for the first time in Europe an issue of banknotes. The coinage of Sweden, being copper, was unbelievably cumbersome. A two-dollar coin was seven and a half inches square and weighed three and a half pounds. "Two hundred of their coins of ordinary denomination made a carriage-load, and even the payment of small sums made the use of carriers and

horses necessary.”⁶ A country with such a system naturally welcomed the bank’s written promises-to-pay, and gladly circulated them as currency. Unfortunately, the notes were soon overissued and copper began to leave the country; notes were presented to the bank so rapidly that it could not redeem them, and the Swedish government finally had to terminate that part of the bank’s business.

Bank of England. The founders of the Bank of England established in 1694 an institution that has continued to the present. Paradoxically the Bank of England owed its charter not so much to a banking need explicitly recognized by the government as to “the pressing necessities of state.” It was founded on government debt. England had been placed in an unfortunate financial situation by its recent kings, and Parliament at that time was attempting to obtain more money to carry on war with France. A sum of one million two hundred thousand pounds was required, and was obtained by a loan from a group of subscribers. In return, the government incorporated the subscribers under the title of “The Governor and Company of the Bank of England”, and agreed to pay annually a sum of one hundred thousand pounds as interest. Thus was founded one of the great financial institutions of modern times. The step also marked the beginning of the permanent national debt of England.⁷

From the beginning the Bank had a guaranteed in-

⁶ Heckscher, E. F., “The Bank of Sweden”, in Van Dillen, J. G., *History of the Principal Public Banks* (1934), p. 170

⁷ See below, pp. 144-146.

come from the government loan, and it could, therefore, with considerable safety make loans beyond its deposits in coin. The bank also issued its own promises-to-pay on demand, or banknotes, as paper money. The government loan constituted an important asset in the bank's accounts and served as backing for part of its issue of paper money. In this manner, government credit was used as security for circulating banknotes. In addition, banknotes were issued to borrowing customers in return for their promissory notes, and credit thus was available for business expansion. Saving was encouraged, for the Bank paid interest on money deposited with it.

Colonial Banks. While banking was developing to an advanced stage in England and Europe in the seventeenth and eighteenth centuries, colonial banking was extremely crude. The modern bank of deposit, which accepts money on deposit, was not known, and the colonial bank, because its main function was to issue banknotes, was defined by one commentator as simply "a batch of paper money." The issuers seldom had permanent places of business or any subscribed capital, and it was even unusual for the proprietors of a bank to have any property to pledge as a basis for the notes issued.

The belief was general that if the notes were backed by land, redemption would not be necessary. The most famous of such "land" banks was that of Massachusetts, which was established in 1714, and which soon became the chief controversial issue of the day. Boston merchants refused to accept its notes, and the royal gover-

nor did all that he could to suppress it. Finally, the British Parliament enacted legislation that prohibited the formation of colonial land banks. This action was the cause of so much resentment and unrest that one authority has indicated that Massachusetts was ripe for revolution in 1741.

By the middle of the eighteenth century, therefore, banknotes were being issued in various parts of the world, secured in some instances by the general assets of the bank, as in Sweden; in other instances by government credit, as in England, and even by land, as in the colonies.

BANK DEPOSITS

Bank deposits came to be generally used as money as a result of the merging of three separate activities into the financial operations of a single bank. These three activities were the transfer services of money-changers, the credit-clearing operations of the fairs, and the deposit services of goldsmiths. All three of these functions were, during the Middle Ages, closely related to the trading activities in the fairs, and the manner in which they came to be merged into the banking function may be understood by observing how bank deposits arose from money changing, debt clearing or commercial credit, and lending activities.

Transfer Banks. Money-changers had early appeared at fairs and other trading centers to make change among the various kinds of coins that would invariably be presented as means of payment by merchants from various countries. Such money-changers were the first

to be referred to as "bankers." During the fifteenth century, some of the more important Continental cities established public (or government) banks because of the unsatisfactory manner in which private money-changers abused their strategic position.

These public banks were formed by such cities for two principal functions. The first function was to act as money-changers and thus accept coins of all varieties of issue and weight and give credit on their books to the depositor, making the entry in terms of the standard local monetary unit. This was called a deposit, and it could be transferred in whole or in part from the account of one depositor to another according to the desires of depositors. Such transferring of funds on the books of the bank was called "giro" banking, and the banks were called giro banks or transfer banks. There was, in this set of operations, no lending by the banks to depositors, but merely the recording and transferring of ownership of coins that were in the vaults of the bank. The second primary purpose of these public banks was to make loans to the cities. Moreover, they were usually forbidden to make loans to merchants. This latter service was performed by private bankers who were, for the most part, private money-changers or wealthy merchants. The private bankers, such as the Florentine bankers, the Fuggers, and the Rothschilds, were primarily great merchants, who engaged in financial activities in addition to trading in commodities.

Commercial Credit. In the larger medieval fair towns of Europe, notably Lyons, Bruges, and Antwerp, the

financial and clearing operations incident to the trading at the fairs came to be an increasingly important part of the activities of the fair. A special place was set aside for the use of the money-changers and for the settlement of the clearing transactions of the fair. Both the place and the procedure came to be known as the "bourse."

There was a large expansion in credit transactions among the merchants frequenting the fair at Antwerp, probably because of the lack of customary restrictions on trade and financial dealings. Bills of exchange, which had already appeared as a method of transferring funds between distant points, became credit instruments as the practice developed of making them payable at a future time as well as at a distant place. During the sixteenth century, also, legal methods were developed for making it possible to transfer promissory notes by endorsement from one party to another. Formerly, credit had been granted to a merchant because the grantor himself thought the borrower was able and willing to pay at the future time. With the development of the bourse at Antwerp, there also developed a so-called bourse opinion of the credit of the individual merchants. When the credit standing of merchants had been indicated to all by this bourse opinion, a third person, not a party to the original transaction in goods that gave rise to the promissory note, might with little risk buy it from the original owner. These developments made possible the expansion of trading in bills of exchange as well as in various types of promises-to-pay. Thus the bourse at Antwerp

became a place at which those who wished to lend could meet those who required extra funds. No longer was it necessary to contact one of the large banking houses like the Fuggers for ordinary requirements of short-term funds, for they could be obtained at the exchange.

During the seventeenth century the business of dealing in bills of exchange assumed increasing importance in Amsterdam with the rising prominence of the Dutch trading empire; and a large portion of the world's commerce was financed in the Amsterdam market by trading in foreign bills of exchange. However, with the decline in power of the Dutch Empire and the rise of English foreign trade, the supremacy of the Amsterdam market was broken, and the London money market became the principal financial center of the trading world.

With the expansion of England's trade, Englishmen developed into money-changers, moneylenders, bullion merchants, and financial middlemen. At first, the business of dealing in bills of exchange was largely in the hands of wealthy English merchants, but soon English foreign-exchange specialists, bill brokers, and, later, banks also became financial intermediaries.

Creation of Bank Deposits. It has been noted that the primary function of the medieval transfer banks was to perform the money-changing activity for the merchants of the trading community. This was probably the earliest manner in which bank deposits were created. However, in addition to the practice of their regular craft, goldsmiths commonly received deposits

of coin and precious objects for safekeeping. In the latter half of the seventeenth century, English goldsmiths and bankers discovered that it was perfectly safe to lend out the funds deposited with them, because all depositors did not demand their funds at once, and frequently when they did want them it was merely to make a giro transfer to some other merchant's account. At first the goldsmiths loaned only what they had in their vaults, but it gradually became clear that they could lend out more than they had on hand, by crediting the account of the borrower with the amount of the loan, and keeping only sufficient cash to meet current demands. The recognition of this principle, often called "the goldsmith principle", marked the beginning of modern bank credit.⁸

Upon the founding of the Bank of England in 1694, this method of creating deposits became legally recognized when the bank was given the power to discount promissory notes and bills of exchange.⁹ Thus, the goldsmiths and the Bank of England merged mercantile credit and bank credit and laid the foundation for the development of the modern commercial bank.

⁸ A contemporary, Sir Dudley North, remarked in 1691 that "The Merchants and Gentlemen keep their Money for the most part with Goldsmiths and Scriveners, and they, instead of having Ten Thousand Pounds in cash by them as their Accounts shew they should have of other Mens Money, to be paid at sight, have seldom One Thousand in Specie; but depend upon a course of Trade whereby Money comes in as fast as it is taken out. . . ." Quoted from Richards, R. D., "The Pioneers of Banking in England", *Economic History*, Volume I (January 1929), pp. 485-502.

⁹ In discounting a note or bill, a bank deducts the interest in advance from the face value of the commercial paper and credits the remainder to the account of the borrower.

As the merchants began to borrow more and more from banks, instead of from each other, to meet their obligations, debt-clearing operations formerly carried out in the bourses were transacted through the medium of transfers on the books of the bank showing the amounts to the credit of the various merchants in the trading community. In other words, by accepting checks and making debits and credits to the accounts of merchants, the bank became a debt-clearing institution. Furthermore, it came to be the practice, where one merchant had borrowed from another and given his promissory note, to use such a mercantile credit instrument as security for borrowing at the bank. In this manner the bank would "buy" the promissory note given by one merchant to another, much as individual traders bought and sold such notes and bills of exchange in the medieval bourses.

Thus it came about that merchants might increase the amount of their deposits in a bank through any one of four operations: first, the merchant might deposit domestic coins for safekeeping; second, the merchant might deposit foreign coins in order to have a credit on the books of the bank in terms of units of domestic money (the bank acting as money-changer in this instance); third, the merchant might deposit in the bank a check that he had received from a sale of goods; and, finally, the merchant might borrow from the bank and leave the proceeds of his loan on deposit. It is evident, therefore, that by the middle of the eighteenth century the essential functions of modern commercial banking had appeared.

THE CAPITAL MARKET

INVESTMENT

Early Stock Exchanges. In the early bourse can also be found the beginnings of the modern stock exchange; in fact, the stock exchanges of modern Europe are called bourses. In the medieval bourses trading developed first in bills and bonds of governments made payable to the bearer, and later in the obligations of private enterprise. The development of such an exchange was of primary importance not only for the raising of capital but for the free exchange of capital without disturbing the original borrower. Thus if a person holding the promissory notes of a merchant found himself pressed for funds, the existence of an exchange made it possible for him to recover his capital without embarrassing the merchant with an untimely request for payment, merely by selling the notes at the exchange. This was an important improvement, for the mobilization of capital was much easier when the lenders could shift the loan to another if the need arose.

To aid merchants in conducting their business there developed at the bourses what amounted to a news-clearing agency, whereby merchants obtained accurate information concerning such things as "the safety of the roads, the course of commodity prices and the credit-worthiness of other merchants." Toward the end of the sixteenth century this work was taken over by

professionals, and news letters soon were printed. Thus, "Long before diplomacy had sufficiently perfected its system to get the necessary political news of its own, an abundance of political and other news reached the centres of trade."¹⁰ This development of a focus of business and credit information was an essential step towards the rise of the modern capital market.

The London Credit Market. Not the least of Gresham's services as finance minister to his country was his influence in the establishment of the London credit market in the middle of the sixteenth century.¹¹ Because of military and political disturbances in Antwerp, Gresham had been urging that the time was ripe to make England independent of others in her government financing. At first his proposal that the government borrow from English merchants met with great objections from the merchants, who were accustomed to Antwerp; but the change was made, and after a period of transition the London merchants began to see the wisdom of Gresham's counsel and that a London market for capital investment was of great value to them. The success of the new market was facilitated by the fact that English merchants had begun to accumulate large capital funds from their activities in the woolen trade. The English government was able thereafter to borrow at home, and the London credit market expanded rapidly. A later important step in

¹⁰ Ehrenberg, Richard, *Capital and Finance in the Age of the Renaissance* (translated from the German by H. M. Lucas, 1928), p. 317

¹¹ Cf. Richards, R. D., "The Pioneers of Banking in England", *op. cit.*, and Ehrenberg, Richard, *op. cit.*, pp. 252-255.

this development was, of course, the founding of the Bank of England described earlier in this chapter.

Public Credit. During the Middle Ages, governments borrowed exclusively from the great merchant princes, at first the Italians and later the Fuggers and other German groups. These were the great medieval bankers. It was an unsatisfactory method, both because of the difficulty in obtaining the loan and because of the great power in internal affairs that often went to the lender. In addition, government expenditures were constantly increasing as feudal armies were displaced by the mercenary armies of the nationalistic period. Kings and their finance ministers turned to Antwerp where their financial needs could be met. Governments kept fiscal agents in the city to arrange for loans as required and to supply the rulers with financial and political information. During much of the sixteenth century, Sir Thomas Gresham represented the English government. He borrowed large sums of money for the English crown and, because of his wise counsel, most of it was paid back as agreed, and the credit of the English government was rated highly on the bourse.

It must not be supposed that the creation of a permanent national debt with the Bank of England, by itself, *founded* public credit. Another important development during this period, which contributed to the origin of public credit, was the development of a continuous national system of taxation. The real beginning of public credit during the period of nationalism consisted of the fact that part of the national expenditures was financed by government borrowing,

and of the fact that public credit came to be based for its security upon the general taxing power of the government rather than upon the credit standing of the king's personal domain or of the cities.¹² Until the end of the sixteenth century, taxes, though not unknown, had been levied only to meet some extraordinary expense such as a war or a royal marriage.

However, the general taxing power of the government became more important with the increasing government expenditures incident to the broadening scope of national governmental activities that arose from the mercantilistic policies of the period.¹³ The needed revenues were raised both by taxation and by borrowing. At the end of the seventeenth century the principal forms of taxes were a hearth tax, customs, and excise taxes. The hearth tax, which was based on the number of hearths in a home, was in effect a crude income tax with a minimum limit, cottages being exempt. Customs and excises were taxes on commodities. Annual tax on land and a stamp tax on various documents had been added as regular parts of the English fiscal system. Customs and excise taxes, however, still supplied the larger part of the income. The practice developed after the founding of the Bank of England of using the Bank for carrying on the fiscal operations of the government and particularly for making short-time advances to the government on the basis of revenues expected from tax collections. This was necessary

¹² Cf. above, pp. 59-61.

¹³ Cf. Marshall, Miss Lydia M., "The Levying of the Hearth Tax, 1662-1688", *The English Historical Review*, Vol. VI (October 1936), pp. 628-646.

since the expenditures of the government were continuous while its tax collections were periodic.

When the ordinary revenues proved inadequate to meet the growing expenses of national defense and national regulation, the government resorted to borrowing. The origin of the permanent English funded debt through the loan made by the founders of the Bank of England has already been described. Whenever the needs of state required, other borrowing was accomplished mainly by the issue of government bonds; but on several occasions, during succeeding periods of stress in the credit market, the government increased its loan from the Bank of England.

With a public credit founded upon the taxing power of the national government by virtue of the system of taxes above described, the English government was able to raise money through the sale of government bonds in the London stock exchange. Trading in government bonds became an important part of the transactions in the stock exchange as well as in the Continental bourses during this period. Moreover, during the eighteenth century the London credit market became the source of capital for the financing of the growing mercantile and industrial enterprise through the sale of shares of ownership in joint-stock companies.¹⁴

SPECULATION

It is not remarkable that along with the development of institutions and legitimate finance, there also

¹⁴ Cf. above, pp. 117-119.

occurred a considerable amount of speculation and shady financing. In fact, hardly had Antwerp become established as a credit market before speculation and manipulation appeared. Bets were placed upon the rates of exchange, and the markets were manipulated to make good the bets. More serious, however, during the first half of the sixteenth century, were the excessive borrowings of the Spanish and French governments, for both states borrowed on the bourses of Antwerp and Lyons in anticipation of revenues from taxes. The markets were glutted with the promissory notes, not only of these two states but of many smaller governments as well. Credit expansion had reached unwarranted heights in the middle of the sixteenth century. This was realized when both the Spanish and French governments failed to pay the interest on their debts, and the financial crisis of 1559 was under way. Everyone wanted to sell government promissory notes, and no one wished to buy. Credit could not be obtained at any price, and a number of banking houses, chiefly German, failed. The repercussions of this crisis were felt for many years later.¹⁵

At the beginning of the eighteenth century another severe crisis occurred, caused again by excessive expansion and speculation. By that time the joint-stock company was beginning to be used in England and transferable shares of ownership were being traded in the markets. In England the East India Company, the Bank of England, and other chartered companies were

¹⁵ Hauser, Henry, "The European Financial Crisis of 1559", *Journal of Economic and Business History*, Vol. II (1930), p. 241.

sound financial ventures, but the wildcat promoter was abroad. For example, a company was organized and its stock was sold, even though it merely stated in its prospectus that the business of the company would be "announced later."

The most famous of the various schemes was the South Sea Company, organized to carry on a slave-trade with the West Indies and to monopolize trade with the people of the South Seas, a rather indefinite part of the world. The company agreed to lend money to the government in return for these monopoly privileges. The stock of this company reached fabulous heights and carried up with it the price of other stocks. But within a few months the price of the shares had dropped to almost nothing. The South Sea bubble, as it was called, had burst along with the other speculative schemes of the time, and thousands of investors as well as the government lost in the debacle. This was the first stock market crash in history, and it occurred as soon as shares of stock were bought and sold and profits could be made in speculative trading with them.

One of the unfortunate aspects of this situation was the passage by Parliament of the Bubble Act. This law made new joint-stock companies illegal and was enacted supposedly at the instigation of the directors of the South Sea Company, who wished to keep others out of the field. This was done in 1719, and the boom collapsed early in the following year. The law was so poorly worded and so strict in its punishments, that, until its repeal in 1825, the corporation was seldom

used in England as a form of business organization.

During this same period, France passed through a similar experience with the "Mississippi bubble", resulting from the spectacular career of the Mississippi Company. The most interesting feature of this episode was that along with the stock speculative boom there occurred the first extensive experience in the use of paper money. John Law, son of a Scotch goldsmith and a financial genius of the time, became at the height of his brief public career the Comptroller General of France. He convinced the French government that with land as a security there could be no overissue of paper money, and, furthermore, that a rapid circulation of money was the animating principle of commerce.¹⁶ However, once started, the paper money was issued in excess, prices rose dramatically, speculative activity developed to extremes, and the inevitable crash followed.

In his later writings, John Law displayed a sounder knowledge of finance, for he abandoned his ideas of paper money based upon land as security, and favored a system of paper money issued by a central bank and secured by a reserve of coins and also by business loans in the form of the promissory notes of manufacturers and merchants (commercial paper). In fact, he was one of the first financial writers to give a concise statement of the theory of modern bank paper money.¹⁷

¹⁶ Heckscher, E. F., *Mercantilism*, Vol. II, p. 235

¹⁷ Wasserman, Max J. and Beach, Frank H., "Monetary Theories of John Law", *American Economic Review*, Vol. XXIV (1934), p. 646

SUMMARY

In the period of economic nationalism finance ministers and bankers were able to observe several developments in monetary principles not previously noted. In the first place, it was learned that satisfactory coins had to be made of a metal combining considerable value in small bulk, and that the proper minting of coins prevented their deterioration. Another important development of the period was the increasing use of paper money, issued both by governments and by banks. In addition, it was observed that an increase in the quantity of money was likely to cause a rise in prices, whether the increase in money resulted from the debasement of the coinage, the influx of gold and silver, or the printing of paper money. Finally, the experience of John Law demonstrated that the value of money was not determined by the commodity upon which it was based but by the quantity in circulation.

In the field of banking, even more important developments took place. Deposit banking was greatly simplified by the increasing use of the check in England and the perfection of the giro system in Europe; the Bank of England adopted the practice of the goldsmiths of creating credit by lending more money than had actually been deposited with it. Both this development and the later exposition of John Law's theories of paper money constitute important parts of modern theories and practices in commercial banking.

Among the various banks formed during this period, the Bank of England was the most important, because

in its early development it combined for the first time the several essential functions that constitute the business of modern commercial banking. The Bank of England was a credit institution, an organ of state finance, a discount and banknote-issuing house, a bullion "warehouse", and a safe depository for public and private funds. It was this banking institution that served largely as the model according to which the numerous private competitive banking institutions of the next period were to be organized and co-ordinated into the modern banking system.

Investment banking likewise became more highly organized. Borrowers no longer had to depend upon merchant princes or private bankers for funds, because the growth of the bourses supplied the mechanism for bringing together in one market borrowers and lenders from far and wide. The basis was established for the development of an efficient credit market, which was destined to play an important part in the revolutionary economic developments of the following two centuries. A significant aspect of the development of a credit market was the rise of public credit and its foundation upon a national system of taxation.

C H A P T E R I X

Mercantilism

DURING the period of economic nationalism in England the economic philosophy of the Middle Ages almost completely disappeared. Both the development of commerce and the Protestant Reformation undermined the economic institutions that had prohibited interest and provided for a just price and just wage. As methods were found for circumventing them, such ideals had been decreasing in importance even during the later Middle Ages; and the conditions under mercantilism, with expanding commerce and independent economic enterprise in competitive markets, finally brought them to an end.

BREAK-UP OF THE MEDIEVAL IDEAL

Changing Economic Conditions. The changes in the economic conditions during the Commercial Revolution led to the downfall of the old conceptions. Expansion of commerce brought with it more opportunities to make profits, and international traders developed

interests far removed from the narrow restrictions of the gild system. Even in the regulated Middle Ages, prices for imported goods had not been determined by the ideals of just price to the extent that gild products were, and when the increased extent of markets made production almost entirely for market instead of for order, there were few restraints that could be exercised successfully either upon the workers or upon the producers and sellers. It was one thing to charge a just price to a fellow-townsmen; it was another thing to charge a just price to a person one never expected to see. It was one thing to fix the price of labor according to the customary standard of living when commodities were sold locally; it was another thing entirely to do so when the goods produced were to be sold in the markets of the world in competition with those of other towns and other nations. In other words, under the new and expanded system of markets it was impossible to apply the standards of a local, personal economy, and just price and just wage lost most of their importance and effectiveness as regulatory devices.

When trade developed in the twelfth century, the Church had relaxed somewhat the ban on interest. It regarded some payment for risking capital as proper. As capital funds were increasingly accumulated and invested in trade, and as the Commercial Revolution became a moving force, the relaxation of the Church ban on interest was still further liberalized to accord with the changing conditions.

Effects of the Protestant Reformation. Another important influence was the Protestant Reformation,

which destroyed the unity of religious sanction, and for the authority of the Church substituted personal responsibility and personal conscience as a guide to right and wrong. No longer was the Church considered the final arbiter in determining justice in economic relations, with authority to lay down the rules of proper action. While the early Protestants were opposed to usury just as vigorously as the medieval Church had been, they broadened the concept by describing usury as taking advantage of another's need. Commercial transactions did not fall under the ban of usury. Interest came to mean the payment for the use of capital, while the term usury was limited to excessive payments for capital, especially in connection with consumption loans. In 1545, in the reign of Henry VIII, an act was passed making legal the charge of ten per cent interest, and by the seventeenth century, Catholic theologians also had practically abandoned the older concept of usury.

The Protestant Reformation also brought a relaxation of the ban on profit from trade. Whereas medieval thinkers had held that trade for profit was sinful, seventeenth-century writers made the acquisition of wealth a moral duty. The changing attitude towards trade, from the position that it was shrouded in the hazards of avarice to the position that it was wholly worthy and to be encouraged, is further illustrated by the following quotations from one of the famous mercantilistic writers of the seventeenth century:¹

¹ Mun, Sir Thomas, *England's Treasure by Forraign Trade* (first published by his son in 1664, probably written in 1630), p. 79

“ . . . for this course in the rich giveth opportunity presently to the *younger* and *poorer* Merchants to rise in the world, and to enlarge their dealings; to the performance whereof, if they want means of their own, they may, and do, take it up at interest: so that our money lies not dead, it is still traded. How many Merchants, and Shopkeepers have begun with little or nothing of their own, and yet are grown very rich by trading with other men's money? . . . by which diligence of the industrious, the affairs of the Common-wealth are increased, the moneys of Widows, Orphans, Lawyers, Gentlemen and others, are employed in the course of Forraign Trade, which themselves have no skill to perform.”

The economic man, seeking his own profit, was identified as a good Christian, on the basis that if each individual acted according to the dictates of his own conscience he would thereby benefit society as a whole. The impact of his association with others would create a sympathetic attitude toward them which would guide his conscience in dealing with them. It was believed that thrift and industry in the individual would bring social accumulation of wealth; and if an individual's rewards proved to be very large he must look upon this as a trust bestowed on him by the Creator, bringing with it a corresponding responsibility. Though the Church could teach him, in the final analysis his conscience was considered to be the best guide in the conduct of this trusteeship. This was, indeed, the beginning of the glorification of the individual that later blossomed forth in the era of individualism. During the nationalistic period, however, individ-

uals continued to be dominated by the powerful corporate unity of feeling surviving from the Middle Ages.

MERCANTILISM

The period of nationalism, the economic aspects of which have been described in the preceding chapters, was above all a period of growth and change. The interpretation of the economic thought of the period must of necessity cover the crude beginning as well as the later, and more carefully formulated, theories. Yet throughout the years from the break-up of the medieval system until the Industrial Revolution ushered in modern times, the system of thought and action called "mercantilism" exhibits certain unmistakable theories and policies.

There were two central aims of mercantilism — to unify the state and to make that state powerful. Whatever the means for attaining those ends, there was regulation by the state in the interest of a group of society which had convinced the state that its best interest lay in the protection of that particular group. As the economic and political interests of different groups varied, the national policies were not at all times consistent. Mercantilism, like most governmental policies, was a series of compromises to the demands of various powerful economic and political groups. However, the idea of national interest was always the underlying framework upon which was built the commercial and political policies of mercantilism.

THEORY OF MERCANTILISM

Ends in View. European countries of the Middle Ages had not been unified, and were held together only by the power of the Church. Reference has been made to the fact, furthermore, that even within a country nationalism was subordinated to local interests. Among other factors, exceedingly poor transportation facilities were responsible for this situation. Under such circumstances central government was weak, and towns and cities were the political and economic units. Tolls and customs existed within countries as well as between countries, although this situation was more true in some nations than in others. During the Middle Ages, for instance, England was comparatively unified, while Italy was composed of separate city states.

One of the ends of mercantilism was to unify the nation by putting into the hands of a central government the power that theretofore had been in the hands of various quasi-independent nobles scattered throughout the kingdom. To this end an attempt was made to abolish tolls; monopolies in production and trade were established to further the control of the state; towns and cities formerly independent were brought under a central government; and internal industry and both internal and external trade were regulated by a central government. In addition, mercantilism sought the development of national power both through economic self-sufficiency and military strength. Any individual activity was regulated if thereby the power of the state could be strengthened.

In order to obtain these ends, many policies, sometimes contradictory, were adopted. Although there were many differences of opinion as to the best methods of achieving the desired results, there was little disagreement as to the objectives. Economic policy is determined not so much by scientific observation of conditions as by what people, frequently mistaken, believe those conditions to be. This should be borne in mind in an examination of the theory explaining the methods used by mercantilists, for in the light of modern economic thought some of those methods appear to defeat their own ends.

Basic Concepts. One of the two basic concepts of mercantilism has been termed the "fear of goods",² meaning essentially a fear of the importation of goods. In contrast with the conception of goods as something to be produced for use or exchange, mercantilists advocated the creation of goods simply for the purpose of disposing of them. Domestic consumption was considered to be without value; the ideal was to send goods abroad. A contemporary writer explains the situation thus: "It is the interest of all Trading Nations, whatsoever, that their Home Consumption should be little, . . . and that their own Manufactures should be Sold at the highest Markets, and spent Abroad; Since by what is Consumed at Home, one loseth only what another gets, and the Nation in General is not at all the Richer; but all Foreign Consumption [of exported goods] is a clear and Certain Profit."³

On the surface such a conception of goods seems

² Heckscher, E. F., *Mercantilism*, Vol. II

³ Quoted in *ibid.*, p. 115.

ridiculous. It is of interest to note, therefore, how the notion gained such prominence among advocates of mercantilism. Probably one reason for the fear of goods was the belief that the creation of employment was a sufficient justification for the production of goods. Believing that everyone ought to be employed, even children of six and eight years of age, mercantilists naturally advocated the production of more goods simply to keep people busy. Another explanation that has been given for such a confused idea is that when a monetary economy replaced the barter economy, producers and exporters in selling their products were attempting to get money and not goods in exchange. Goods produced and sold by others were therefore considered undesirable, because those goods were competing for money with one's own products. It followed that the more goods produced and sold, the greater the advantages accruing to the individual producer or trader. These traders often were able to convince the government that what was to their advantage was also beneficial to the entire country.

Closely connected with the fear of goods was another conception, held by many mercantilists, that all money, especially gold and silver, was important in itself. Money was ever the sinews of war. To make their country impregnable, therefore, leaders of nationalistic thought desired in every possible way to increase the country's holdings of gold and silver. They desired strict prohibitions of exports of the metals, and thought that in order to draw gold into the country the mint should offer high prices for it.

Such a scheme of national hoarding of precious

metals was, of course, not approved by the merchants. When the East India Company, and the other large trading companies, found that the only way to get the goods of the East was to pay for them in cash, they were able to convince the government that the shipping of gold was similar to the planting of corn. Grain planted in the spring was not wasted, since it returned many-fold in the fall. According to the merchants, the gold sent out of the country was not lost permanently, but its exportation merely made possible the later receipt of much larger amounts of the metal. A substitute for the prohibition of gold exports was the proposal that England should maintain a favorable balance of trade by shipping more goods to another country than that country sent to England. This notion was later extended to mean that the general balance of trade with all countries should be favorable rather than the balance with any one country. This excess of exports over imports was thought particularly advantageous both because the balance would be settled by gold and also because the importation of goods would be at a minimum. The attitude is illustrated by a quotation from a mercantilistic authority of that period:⁴

“... we ought not to avoid the importation of forraine wares, but rather willingly to bridle our owne affections to the moderate consuming of the same; for otherwise, howsoever the *East India* Trade in particular is an excellent meanes greatly to encrease the stocke of money which we send thither yearly, by returning home five times the value

⁴ Mun, Sir Thomas, *A Discourse of Trade* (1621), pp. 56-57

thereof in rich commodities, all which (in short time) may bee converted into Treasure. . . . Yet notwithstanding, if these *Indian* wares thus brought home, cannot be spared to serve for that purpose of Treasure; but must be sent forth together with our owne native commodities; and yet all little enough to provide our excesse and extraordinary consume of forraine wares; then is it likewise as certaine that the generall Trade of this Kingdome doth hinder and divert the comming in of the said Treasure, by over-ballancing the value of our wares exported; with the importation and immoderate consume of forraine Commodities."

METHODS OF ATTAINING THE OBJECTIVES

Like its theories, the methods of mercantilism were proposed by believers in the doctrine of national self-sufficiency, tempered by a powerful merchant group that desired legislation favorable to its interest. The national government supposedly could achieve both national unity and self-sufficiency by laws, and from the time of Queen Elizabeth until the beginning of the nineteenth century dozens of laws were passed regulating strictly every branch of trade and commerce, as well as of domestic agriculture and industry.

Import Trade. In the opinion of the advocates of national economic self-sufficiency, and to those persons fearing goods, imports were particularly harmful, and importers had to justify themselves by showing the usefulness of their occupation. High taxes were levied on most imports, except upon certain essential raw materials, munitions, naval stores, and lumber. Those

products were exempt because they were needed in England and could not be produced there, or could be procured more easily abroad. The importation of goods that might be classed as luxuries was always frowned upon. For example, the importation of wine was especially objectionable. Though wine could not be made in England, it was a luxury which the English people could do without, since the purchase of wine necessitated the exportation, in exchange, of more essential products. The Greek currant trade was attacked for encouraging the people to spend money upon puddings and cakes "whereas in other countries they eat none." In order to build up the fishing industry, and thus indirectly the navy, measures were enacted to encourage the use of fish. The English government decreed fish days more frequently than had the Church, and forbade admission of foreign fish.

Exports. The exportation of goods, one of the objectives of mercantilism, was sometimes restricted by the emphasis on national self-sufficiency. In general, only those things of which England had an abundance could be exported, such as certain manufactured products, tin, coal, and leather. Munitions, of course, could not be exported, and food products could be sent out only by special license. On one occasion the City of London petitioned Parliament to prohibit the export of butter unless the price at home was less than 4d. a pound. During the seventeenth century the export of wool was prohibited, so as to insure an adequate supply of the raw material for the rapidly developing English woollen manufacturing industry. Then, to

foster this new industry, all citizens were urged to use woolen cloth; and one law even went so far as to require the dead to be buried in woolen shrouds. There were similar regulations to stimulate other industries.

To be a strong and self-sufficient nation a country must have an adequate supply of labor. Large families were sometimes subsidized, and mercantilistic governments placed embargoes on the emigration of skilled artisans. Furthermore, aliens were urged to immigrate to England, particularly if they were skilled craftsmen. When the Huguenots, many of whom were skilled weavers, were driven out of France, they found a ready refuge in England.

The Corn Laws. The most famous of these export restrictions were the "corn laws", for they remained on the statute books in some form until the middle of the nineteenth century. When first passed, the laws were designed to restrict for English use domestic grain products unless a low domestic price indicated that the supply was unusually large. Somewhat later, in 1689, a plan was introduced to stimulate maximum food production. The law provided that if a large supply of wheat caused its price to be less than \$1.46 (six shillings) a bushel, its importation was prohibited and a bounty of fifteen cents a bushel was given for exporting it. When the price was between \$1.46 and \$1.62 imports were still prohibited, but no bounty was paid for its exportation. Between \$1.62 and about \$2.45 a duty of twenty-five cents a bushel was levied on imports, whereas if the price were above \$2.45 grain could be imported duty free.

Navigation Acts. Also necessary for a strong, self-sufficient national government was a merchant fleet that could be transformed into vessels of war when needed. This policy was the basis of the navigation system of mercantilistic England. In 1650 and 1651 came the first of a series of navigation acts designed to encourage the building of a strong fleet. By these acts no commodity grown or manufactured in Asia, Africa or America could be imported into England, Ireland or the colonies unless in English or colonial ships manned by a majority of English or colonial seamen. Further laws of a similar character passed in the seventeenth and eighteenth centuries strengthened these first navigation acts.

From an economic point of view such laws as the navigation acts cannot be defended. The reason that England needed the laws to encourage shipping was that other nations, particularly the Dutch, were able to do more efficiently the carrying trade of the world. As these restrictions raised shipping costs, the people of England were paying higher prices for commodities. But political rather than economic arguments were used. Since merchant ships could easily be converted into men-of-war, anything that encouraged shipping was considered beneficial to the state.

COLONIAL POLICY

The desire for self-sufficiency likewise was the basis for the colonial policy of England. To such considerations were added the selfish arguments of the exporters; they wished the government to establish

colonies that would furnish an exclusive market for English exports. Mercantilists believed that such an empire was needed as a market for English manufactured products and also as a source of commodities not obtainable in the mother country. Moreover, a system of importing from the colonies prevented a drain of gold to some foreign country. For instance, when her colonies produced sugar, England no longer needed to pay large annual sums to Spanish and Portuguese growers. Under the mercantile system such a saving of specie was considered a distinct gain.

The colonial system of mercantilistic England was in reality a trade empire or hanse. England provided the settlers, furnished the capital with which to work, insured a protected market for colonial commodities, safeguarded the trade routes, and agreed to defend the colonies. In return for these services, the mother country expected to establish regulations designed to repay her for the benefits conferred. England demanded that the colonial trade be retained in the hands of Englishmen so that her shipping would benefit. Colonial industries were to supplement the industries of England. Bounties, for instance, were paid for the production of naval stores; the fabrication of iron products was suppressed, but production of pig and bar iron was encouraged. Furthermore, England sought to develop colonial markets for English manufacturers, and in return refused to allow English industries to compete with colonial monopolies. English tobacco fields, for instance, were destroyed by royal order.

In many ways British colonial policy was disad-

vantageous to the colonies; in some respects it proved beneficial. Certainly the effects upon the colonies were not disastrous. The navigation acts, by excluding foreign competition, tended to increase freight rates. A middleman's profit had to be paid to English merchants because, according to the English laws, most of the colonial exports and imports had to pass through the warehouses of British merchants. The Spanish colonies of the West Indies were the source of the gold and silver with which the colonists were expected to settle adverse trade balances; but trade with these places was forbidden. On the other hand, the best interests of the colonists were often identical with those of the mother country. It was unquestionably sound for a new country to devote itself to the production of raw materials, which was what England demanded. The bounties granted by the British government, together with the preferential treatment extended to colonial products, gave the colonists practically a monopoly in the British market for many of their exports. Moreover, the effects of laws that might have injured the colonies were mitigated by the frequent lack of enforcement. The colonists were masters at the art of evading restrictive legislation.

EVALUATION OF MERCANTILISM

To be judged properly, a system of thought and action must be considered in the light of the times during which it was current as well as by the standards of modern economic and political thought. The surge of nationalism following the disruption of the Middle

Ages was no doubt a forward step in the march of progress. English nationalism between the fifteenth and eighteenth centuries was not a reversion from internationalism, but a growth from local to national loyalties. Nationalists have ever thought in terms of future wars. They are willing to sacrifice the greatest present good for what they consider to be the greatest future good. What if English and colonial shippers had to pay higher freight rates because of the navigation acts? England was thereby building a strong navy. What if imported commodities did cost less than those produced at home? It was the price England paid for becoming more self-sufficient. The fact cannot be denied that England did become a strong and powerful nation during those centuries when mercantilistic ideas prevailed.

On the other hand, it is one thing to admit that you wish your country to have a lower standard of living and be self-sufficient but quite another to maintain that a program for self-sufficiency is economically sound. Laws sponsored by nationalists and by merchants were, perhaps, beneficial to special groups; but economically they were not to the best interest of the entire nation.

In a number of ways, the theories of mercantilism do violence to modern economic thought. In the first place, there was an apparent confusion of gold with wealth. Gold is really of little use unless spent for goods, and laws that increase the national hoard of gold deprive the nation's citizens of many goods and services they might otherwise have purchased. The mercantilistic concepts of goods and of trade were particularly un-

economic, for goods are of value only as they are consumed. Furthermore, a favorable or unfavorable balance of trade cannot exist for any extended period of time, for those who do not buy cannot expect to sell; trade is an exchange of goods and services. Unless a nation desires to give its products away, it must accept goods or services in exchange for its exports. Likewise unfounded was the notion that one country alone gains by trade. Goods are exchanged between citizens of various nations for the same reason that goods are exchanged between citizens of the same nation. A man engages in trade when he desires the products of another more than his own; therefore he is willing to dispose of his products in exchange for the products he desires.

Artificial interference with trade, as practiced by mercantilistic legislators, created international inefficiency. Laws often forced nations to engage in productive activity for which they were ill-adapted. In other words, the restrictive legislation interfered with the most effective geographical specialization. In the eighteenth century Adam Smith exposed the fallacies of the doctrines of economic nationalism and urged less governmental interference in economic activities. But selfish interest and rampant nationalism have been so strong that the principles of mercantilism have not yet disappeared.

PART THREE

ECONOMIC REVOLUTION

C H A P T E R X

Industrial Revolution

The Period of Economic Revolution. Although much of the foundation of modern economic society was laid during the three centuries from 1450 to 1750, the actual development of present-day institutions took place during the next hundred years. During the latter half of the eighteenth century and most of the nineteenth there occurred in the western world a series of such fundamental changes in economic conditions and institutions that a veritable economic revolution was effected.

Several major developments mark this period from 1750 to 1850. In the first place, a tremendous expansion in all phases of economic activities accompanied a rapid growth in population, resulting in a very complex economic organization of society. Second, there occurred revolutionary improvements in the technique of production and distribution of goods and services, as new methods appeared in manufacture, agriculture, trade, transportation, communication, and, to a less

extent, in finance. During the period a complete reversal in economic doctrines also took place with the rise of the philosophy of individualism, according to which economic activities were carried on by free private enterprise operating under competitive conditions. Finally, and as a result of the individualistic doctrines, a new relationship arose between government and economics, whereby the government withdrew from its former regulatory position and followed a policy of *laissez faire* toward economic activities. By the middle of the nineteenth century, therefore, the economic system that had arisen during the period of nationalism had practically disappeared, and the complicated modern economic society had emerged.

NATURE OF THE INDUSTRIAL REVOLUTION

The most striking transformation took place in the field of manufacturing. Here the revolution consisted essentially of the substitution of machine processes for hand methods and of artificial power for human labor. In the earlier stages the introduction of labor-saving mechanical processes was gradual, and the power was still supplied by the operators. This was followed first by the use of water power, and later by the application of steam, to run the machines. This sequence appeared particularly in the cotton textile industry, for it was in the spinning and weaving of cotton that the revolution first developed. Rapid changes also occurred in the metal industries, and slower though important improvements were intro-

duced in the woolen and pottery industries. In each of these lines the transformation was marked by an increase in inventions, a greater investment of capital in machines, and the rapid growth of the factory system, all of which resulted in the large-scale production of commodities at lower costs.

Considering the years during which the most important changes took place, the Industrial Revolution in England occurred in the half century between about 1775 and 1825. But if the broader view is taken that a revolution is merely a period of rapid evolution, then the changes beginning in the early eighteenth century accumulated gradually and developed into a rapid movement at the end of that century. The basis was thus laid for the great expansion during the next fifty years which led to the era of tremendous productivity in the latter half of the nineteenth century. In that light, the period of the Industrial Revolution includes the two hundred years from 1700 to 1900. During that time both England and the United States passed from an agricultural to a predominantly industrial economy. Indeed, considering the great progress and expansion that have occurred in the twentieth century, particularly in the electrical and chemical industries, the Industrial Revolution is not yet concluded.

CAUSES OF THE REVOLUTION

This revolution in manufacturing occurred first in England, then in several countries of Continental Europe, later in the United States, and most recently in Japan and Russia. A combination of circumstances

toward the end of the eighteenth century favored the occurrence of the Industrial Revolution in England at that time.

The genesis of the transformation lay in the Commercial Revolution of the preceding century. If goods are to be produced and sold on a large scale, wide markets must be available and commerce must flow freely. England's rise to commercial supremacy assured the existence of these requisites. Far-flung colonial possessions and extensive commercial relations with other countries were being developed. England's merchant marine could bring raw materials and food supplies to her shores and transport her manufactured products to all parts of the world. To pay for these imports and to meet this potential world-wide demand, serviceable commodities were produced and sold cheaply enough to be bought by the common people of those nations that had products to pay in exchange. This extension of the market area over which goods could be exchanged stimulated the introduction of improvements in industrial technique throughout the eighteenth century.

At the same time, domestic markets were also expanding, cities were growing, rural areas were more productive and were being opened to more commerce, the variety of people's wants was being extended, and as a result internal trade was increasing. This development of domestic trade was aided by the absence of the internal customs barriers existing in most other European countries at the time. In addition, transportation methods within the country were being improved

through the construction of turnpikes and, in the latter part of the eighteenth century, through the digging of canals. These facilities, together with the many navigable rivers and good harbors, made it possible for goods to be exchanged throughout the country with relative ease, and the roads and canals also opened avenues to the numerous ports of the kingdom for the exportation of products.

The introduction of machinery to produce goods on a large scale depends also upon the existence of capital funds that can be devoted to the building of machines. Here again circumstances favored England. The large profits resulting from the commercial activities of chartered companies and other English merchants created a rapidly growing capital fund, the owners of which were eager for profit-yielding opportunities. Furthermore, the capital accumulated and used by merchant-capitalists in the domestic putting-out system of manufacture furnished an additional source of funds which in many instances were invested in machines and factories. The establishment of the Bank of England in the late seventeenth century and the appearance of other banking institutions aided the development of a financial and credit structure that was of incalculable aid to the manufacture and distribution of products in large quantities. With the development of financial institutions, credit was more easily available, and capital flowed to any locality where there existed the raw materials, labor, or other conditions favorable to machine production.

In her natural resources, England was particularly

fortunate. The fundamental basis for her industrial supremacy of the nineteenth century lay in the abundance of her coal, iron, and other natural resources. The rapid increase in the production of wool, after the enclosure movement, furnished a continuous supply of that raw material for the developing woollen industries. Large deposits of clay in Staffordshire assured the pottery makers of materials for expansion. And, although no cotton was grown on the island, the climate of Manchester and Bolton produced such a uniform humidity that cotton could probably be spun there as successfully as anywhere else in the world.

Labor conditions were also propitious for industrial development. On the one hand, an influx of skilled artisans from the Continent about the beginning of the eighteenth century stimulated the production of goods of superior quality and increased the technical knowledge of the English. These immigrants were principally refugees from Continental religious wars, the most numerous being the Huguenots, who were exiled by France after 1685. On the other hand, the supply of unskilled labor was considerably augmented by former agricultural workers expelled from the land by the enclosure movement of the eighteenth century.

Certain other conditions conducive to rapid industrial growth existed in England at the time. In contrast with the situation in other leading European countries, the earlier restraints upon manufacturing exercised by the Church and the guilds had practically disappeared. Moreover, there was a decline in the control exerted by the national government over economic and trading activities. Various monopolistic devices, formerly

granted to favored groups to restrict production and trade, were disappearing or being disregarded. This decrease in governmental regulation was accompanied by the rise of the philosophy of economic individualism. The belief was spreading that only through competition could goods be produced cheaply enough to be sold over large areas at low prices. The industrial development of England undoubtedly was accelerated by this increasing freedom on the part of individuals to follow their own dictates in their economic relations.

It was amid such circumstances as these that the Industrial Revolution developed. Its progress was accelerated by the successful culmination of a large number of inventions which, in most instances, were based on previous experiments. Occasionally an ingenious person, usually building upon the efforts of predecessors, would invent a device that increased productivity per worker. During the early eighteenth century such inventions appeared especially in the manufacture of cotton textiles, though many mechanical improvements were introduced in other industries. The inventive movement was furthered by the rise of experimental and applied sciences, for this new interest in the natural sciences was directed largely toward improving the technique of industrial production. Environmental conditions were such as to make inventions very profitable. Prizes and awards were frequently offered for improved devices, indicating that in this period a deliberate effort was being made to increase production and to secure the resulting large returns—a response to the challenge offered by the conditions of the time. In any event the number of inventions increased so

rapidly, especially in the latter part of the eighteenth century, that the period is frequently termed "the age of invention." And although there was no single cause of the Industrial Revolution, these inventions were its most direct expression.

TECHNOLOGICAL CHANGES

Cotton Industry. A clearer understanding of the nature of the Industrial Revolution may be gained by examining some of the technological improvements that occurred. The transformation appeared first in the cotton textile industry, partly because as a new industry it was free from previous restrictive laws, and partly because the large demand in India for cotton cloth stimulated production. As a result of a number of mechanical improvements, the cotton industry became the most important in England.

In 1733 there was invented a weaving device that allowed one man alone to operate a loom. This practically doubled the output of cloth per weaver, and spinners were unable to turn out enough yarn to keep the weavers busy. After many efforts to meet this demand by improving the technique of spinning cotton into thread, James Hargreaves in 1767 invented a machine that he called a spinning jenny.¹ Although the

¹The story is told that upon returning home unexpectedly one day Hargreaves startled his wife, Jenny, who was spinning yarn on an old spinning wheel. She jumped up and upset the wheel, which continued to revolve on the floor horizontally with the spindle in a vertical position. Being struck with the idea of running several spindles with one wheel he constructed a machine that allowed a person to spin seven threads at one time. He called it the "Spinning-jenny" in honor of his wife. Another story has it that he so named the machine because it did the work of women.

jenny greatly increased the productive capacity of a spinner, it could still be operated in the home. Only two years later, however, a spinning machine was invented that was so large as to require water power to operate it; hence factories had to be built along streams to house the machine. After 1785 Watt's steam engine was gradually substituted for both hand and water power as machines were increasingly assembled in larger factories.

As a result of these inventions, spinning production advanced ahead of weaving and large quantities of yarn were exported. Finally, in 1785, after a number of failures, a power loom was invented, and weaving, too, became concentrated in factories. The great expansion of the cotton textile industry, however, did not occur until, at the end of the century, the invention in America of the cotton gin created an almost inexhaustible supply of cheap raw material. Thereafter the production of both cotton yarn and cloth increased rapidly, for England was able to produce the finest cloth in the world at low costs. The extent of the growth of the cotton industry can be appreciated when it is seen that the two million pounds of cotton imported into England in 1700 increased to 56 million in 1800, to 750 million in 1850, and reached 1,500 million in 1875.

Woolen Industry. The introduction of machinery and the application of power occurred much more slowly in the woolen industry than in cotton textiles. To some extent, this was due to technological difficulties in adapting wool to machine production, es-

pecially as there were a greater number of separate processes in the preparation and manufacture of woolens. Furthermore, the production of woollen goods was more widely scattered throughout the country, thus hampering the dissemination of improvements. But probably of most importance was the fact that the combing, carding, spinning and weaving of wool had been carried on in English homes by hand methods for centuries, and the adoption of new techniques was opposed by tradition and vested interests. Whereas the cotton industry was a relative newcomer and expanded practically unopposed, efforts to introduce mechanical improvements in woolens and worsteds met with personal opposition from thousands of hand operators. For several decades these workers engaged in a campaign of physical intimidation and destructive violence wherever new machinery appeared. Moreover, legal obstacles were imposed, and the industry was protected by various monopolistic laws in the shadow of which progress was hampered and initiative was inert.

Despite these handicaps, jennies began gradually to be used in spinning wool, and by 1785 the use of water-power machines had become somewhat general. By the end of the century steam was also being applied to machinery for spinning wool in factories. Utilization of power in the weaving of woolens appeared more slowly, however, and power looms did not become common until the early nineteenth century.

Iron and Steel Industry. Although the revolution occurred first and most spectacularly in the textile

industries, the transformation of the iron industry followed closely, and ultimately affected the development of our economic civilization probably more profoundly than any other. As large machines could be made of iron and steel their introduction into innumerable other lines laid the foundation for great expansion; and increased production of iron at lower costs also stimulated those industries that used it as a raw material. There were four outstanding changes that brought about the revolution in iron: the methods of smelting iron ore into pig iron, the manner of refining pig into malleable iron, the process of making steel, and the application of steam power.

For centuries iron ore had been smelted through the use of charcoal. However, the supply of wood for charcoal was being exhausted to such an extent that in the early eighteenth century the iron industry in England was actually declining. Efforts had been made for decades to use coal in smelting the ore, but its sulphur content made the iron brittle. About 1750 Darby made coal into coke, and by using coke to fire blast furnaces, succeeded in producing pig iron that could be refined into malleable bar iron. The dependence upon wood was further diminished when coal was used satisfactorily in a reverberatory furnace to convert pig iron into malleable bars of wrought iron. The substitution of coal and coke for wood and charcoal in smelting and refining iron was an outstanding event in the Industrial Revolution.

Another step of paramount importance in the development of the iron industry was the application

of steam power to several processes of iron production. Watt developed his steam engine by seeking to improve the inefficient and clumsy Newcomen steam engine, originally used to pump water from coal mines. In 1776 Watt produced his first successful engine and in five years it was being employed in the iron industry for blowing the bellows of blast furnaces, for running forge hammers, and for the rolling and slitting processes.

Steel of poor quality had been made very crudely since the Middle Ages by combining malleable iron with charcoal. Near the middle of the eighteenth century there was invented the crucible process of steel-making by resmelting the iron in a crucible and adding carbon directly to it. Although the result was a superior quality of steel, production was still on a small scale. Over a century later Bessemer constructed a vessel for converting iron into steel on a large scale, and the "Bessemer process" was widely adopted. Shortly thereafter the "open hearth" method was discovered, and since then steel has been rapidly displacing iron in general use. The development of the iron and steel industry can be gauged by the rise in the output of pig iron in England from 25,000 tons in 1720 to 125,000 in 1796 and to 1,347,000 tons in 1839.

Other Industries. Changes of a revolutionary nature were occurring in many other industries during this period. Because of its many new uses the demand for coal was expanding tremendously. In 1700 only about two million tons were mined, whereas in 1800 over ten million were produced; the tonnage increased to

over 50 million in 1830 and to about 250 million in 1900. Principal improvements in coal mining were the use of steam power in pumping water, in hauling coal, and in ventilating shafts, the introduction of safety lamps, and the application of more scientific methods in exploiting the coal seams.

The growth of the iron and steel industry has necessitated the development of the machine trades. Improved lathes made possible greater precision in boring, turning and planing, so that England soon became the world's leading producer of machinery. The cutlery, hardware, brass and copper industries also developed rapidly. Although invention and machinery played little part in its growth, the pottery industry became one of the most prominent in England, mainly through a transformation in processes and formulas, combined with the concentration of raw materials in Staffordshire and the genius of Wedgwood and Spode.

FACTORY SYSTEM

For over one hundred years before the application of steam power to machines, factories had appeared in various industries.² They occurred especially where capital investment was necessary, as in the early iron-works and printing shops; where a relatively large labor force was essential, as in mining; or where it was advisable to combine various processes under one roof, as in the cloth industry. In a number of lines, such as the cloth and weapon industries, the pressure of a con-

² For numerous examples of early factories, see Nussbaum, *A History of the Economic Institutions of Modern Europe*, pp. 211-219.

stantly increasing demand forced the progressive enterpriser to organize production on a planned basis. Consequently, he collected hand-workers together in a factory under his direct supervision.

In most lines, however, the domestic worker was able to hold his own in competition with such "manufactories." The methods and tools were much the same in home and factory, so that the embryonic factories could not produce at a sufficiently lower cost per unit of output to displace the domestic worker. On the other hand, when power machinery began to be developed, the new machines were usually so costly that the domestic operator did not possess the necessary capital to purchase them, and they were so cumbersome that he could not install them in his cottage.

Development of Factories. The machines had to be placed in large separate buildings, by a stream if water power was used, or near coal fields (or on water routes from coal fields) if they were steam-driven. For the construction of these buildings and machines, large amounts of capital were required. These were supplied by a new owning and employing class of industrial capitalists. To operate the machines, large groups of employees were concentrated for work under one roof. The owners had to keep the machines operating regularly in order to earn a profit from them. Consequently, it became necessary to subject the laborers to disciplinary supervision, especially with respect to hours and working conditions. Thus, to produce standardized goods on a large scale in the modern factory, capital was invested by industrial employers in power-

driven machines which were collected under one roof and operated by large groups of supervised employees.

Factories developed rapidly in the cotton textiles, and were used in the spinning of wool by 1790. The earlier small ironworks were enlarged as that industry developed, and the new form of industrial organization soon spread into many other lines. Though these factories were small when compared with modern plants, nevertheless the first quarter of the nineteenth century saw the factory system finally established, and by the middle of the century it dominated practically every industry. These factories were located principally in the north and west of England adjacent to the coal and iron areas. With the consequent migration from southern England, many districts formerly prosperous under the domestic putting-out system were left practically deserted.

Disappearance of Domestic System. This rapid displacement of the domestic system was accelerated by the changes taking place in agriculture, which also was affected by the adoption of large-scale methods. But the spinning of cotton thread by hand could not long survive when the price of a certain quantity of yarn, which had been thirty-eight shillings in 1786, as a result of cheaper machine production dropped to nineteen shillings in 1796, to seven shillings ten years later, and to three shillings in 1832. Owing to the fact that spinning formerly had been done principally by women in their homes, little opposition could be offered to the new technique. The struggle against the new system by the hand-loom weavers of wool was more determined, but

when their weekly wages, for working in their homes, declined from twenty-five shillings in 1800 to five shillings in 1830, they had little chance of earning a livelihood, and by the middle of the century they, too, had practically disappeared. The former domestic handworkers usually became laborers in the new factories, or in a few cases, with the financial aid of wealthy merchants, were able to establish factories of their own.

EFFECTS OF INDUSTRIAL REVOLUTION

Detrimental Effects. It is inconceivable that such a transformation in economic life as was produced by the Industrial Revolution could take place without creating many evils and much hardship. The most unfortunate of these were chiefly immediate in effect and transitional in character. As a result of the influx of laborers to the new industrial cities, sanitary facilities were taxed beyond capacity, housing conditions were deplorable, and families were frequently crowded into single rooms, garrets or cellars. The existence of filth on every hand produced such an unsanitary environment that epidemics broke out repeatedly.

Equally bad were early factory conditions. Not only were the hours inhumanly long, but the conditions surrounding the workers were wretched. Few sanitary facilities, poor lighting and ventilation, and usually no safeguards against accidents made the factories unhealthy and dangerous. The introduction of machinery allowed the substitution to a large degree of unskilled for skilled labor, thus making it profitable to hire women and children to labor in this environment.

In textile factories they frequently constituted from sixty to eighty per cent of the working force.

Any dynamic change will injure certain groups, and the displacement of the domestic putting-out system fell particularly heavily upon those skilled craftsmen who struggled desperately and pathetically against the encroachment of the machines. As wages per piece were lowered, their lot became increasingly miserable until their generation finally died out. But most of these immediate evils of the new system existed because it was extremely difficult for the country to adjust itself quickly to an entirely new set of industrial conditions, conditions never before witnessed by the world. Consequently, there was a complete absence of any program of control by society to mitigate the evils of the transitional period.

Other unfavorable criticisms of a more long-range nature may be directed at the factory system. Many of these disadvantages continue to exist at the present time; though some appear unavoidable, others might be corrected through intelligent social control. The large-scale production of goods for distant markets accentuated the occurrence and severity of business cycles, with resulting periods of boom and depression. Such maladjustments in supply arose primarily from a greater difficulty in estimating correctly the fluctuations and shifts in demand throughout such broadening markets. This instability of the industrial organism was further increased under the new system by the high degree of interdependence among the numerous agencies of specialized production created by the

greater division of labor. The continuous operation of one plant was dependent upon the proper functioning of many other agencies of production and distribution.

In contrast with conditions under the domestic system, the laborers under the factory system had no farm income to fall back upon in the event of reduced factory earnings. Fluctuations in production caused much irregularity in payment of wages, and as workers were thus dependent solely upon their wages, a far greater degree of economic insecurity existed. Moreover, factory laborers did not possess the interest in their work nor the feeling of pride of achievement that formerly had accompanied the exercise of their handicraft. Not only did they lose their independence of action, but they were subjected to the closest disciplinary supervision and to the monotonous routine of repetitive tasks. The factory system also broadened the divergence of interests that had already appeared between the employer and his employees. It produced a relatively small group of capitalistic employers on the one hand and, on the other, a large class of permanent wage-earning employees. The disproportion of power between them was increased, and great extremes of wealth and poverty became more apparent.

Beneficial Effects. Despite the many unfortunate effects of the new system of production, the ultimate results of the Industrial Revolution were highly beneficial from an economic standpoint. It represented another long step forward in man's subjugation of nature, even though it made the individual more dependent on his fellow men. As already indicated, the

preceding industrial system was by no means the golden era for the working population as it is so often pictured, for although it did produce a fair degree of independence and security, the independence and security was amid squalor. The substitution of mechanical slaves for human hands and of steam power for human muscles aided mankind immeasurably in its struggle to liberate itself from economic scarcity. The production of goods was enormously increased, and a far greater variety of products became available at much lower prices.

Weekly monetary wages of laborers operating the machines were higher than under the domestic system, and new opportunities for work were created as factories were built and expanded. Although hand laborers were displaced, many of them were absorbed by the factories, and in some ways the unfavorable transitional effects upon workers were not so widespread as frequently depicted. The worst evils were those surrounding the working conditions in the factories, but eventually the factory workday was shortened, the labor of women and children was restricted, and the industrial cities solved many of their housing and municipal problems. The new industrial areas became prosperous, the improvements in transportation and communication widened the area of travel and knowledge, and the ultimate result was a higher standard of living throughout the country for all classes, though some groups benefited more than others. Although the advance in material well-being resulting from the Industrial Revolution was remarkable, it

must be recognized that such economic prosperity is not synonymous with human happiness, and frequently there is a question as to the ultimate effects of the new conditions upon moral and ethical values.

The general effects of the Industrial Revolution upon England were far-reaching. During the nineteenth century she became the foremost industrial nation of the world. Her trade increased, her capital and wealth multiplied, and her manufactured products were sold over all the world. Her population increased rapidly and was employed principally in industry, commerce, and finance. The chief causes of this increase were the greater economic productivity of the country, which made possible sustenance for greater numbers, and the rapid reduction in the mortality rate resulting from the advance of medical science. Food for these millions was imported from other countries and was paid for by the export of manufactured products.

AMERICAN INDUSTRY

Colonial Industry. Although the Industrial Revolution in England was dramatic in its amazing effects upon the country, the industrialization of the United States was the more remarkable in the extent of its development from such insignificant origins into the vast structure of the twentieth century. During the colonial period, while English inventions were initiating the new system of production, industry in this country was still mainly in the pioneer stage of household self-

sufficiency, in which each family produces for itself the manufactured goods needed. There were some shops of handicraftsmen in towns, the domestic putting-out system appeared here and there, and a few mills (mainly gristmills, sawmills, or ironworks) were established at advantageous locations. The small amount of manufacturing, such as shipbuilding and naval stores, was dependent upon the forest and extractive industries. However, agriculture and commerce were so much more profitable than manufacturing that less than ten per cent of the people was engaged in industrial occupations.

Factors Retarding Industrialization. The reasons for delay in industrial development in early American history are fairly obvious. The relatively primitive conditions of a pioneer economy are not conducive to the expansion of industry, and population was not sufficiently concentrated to furnish steady markets for manufactured products. Industry suffered a comparative disadvantage with respect to agriculture and commerce, for it was more remunerative to engage in farming or trade and purchase manufactured products from Europe. The vast areas of cheap, rich, unoccupied western land attracted men who were loath to become laborers in eastern factories in view of these western opportunities. Most of the small amount of capital funds being saved was used to make improvements on land, or was drawn into shipping and later into internal transportation projects. As a result of the relative scarcity of capital, interest rates were high, and industry, which requires large quantities of capital,

was handicapped. Consequently, household industries continued and the industrial transformation of this country had to await the rise of conditions more favorable for large-scale production — particularly more extensive markets, which were later to develop with the improved transportation facilities and the growth of population.

Factors Stimulating Industrialization. Factors that stimulated manufacturing were not slow in emerging, however, particularly during the second quarter of the nineteenth century. Population increased greatly, due both to immigration and to the high birth rates of an agricultural, pioneer people. Many of the immigrants were skilled artisans, but others, because of a lack of skill or capital, were forced to become laborers in factories. As a result of the enlarged population, domestic markets expanded, and with the improvement of transportation facilities, a greater geographical specialization occurred. Markets were created in the agricultural South and West for the manufactured products of the largely industrial East.

Furthermore, there were gradually increasing accumulations of capital as the earnings of small mills and factories were reinvested, and as profits made in commerce sought more lucrative fields in industry upon the decline of American shipping after 1840. As a result of the rapid increase in their capital, European investors began to send funds here to reap the higher returns obtainable in the development of a new country rich in resources. Finally, of course, it was the existence of these abundant raw materials and almost inex-

haustible natural resources that proved to be the fundamental basis for our development and future wealth. In the utilization of these resources, inventions were perfected, new methods and machines were ever being adopted, and the conservatism of tradition was practically unknown.

The government was extremely lenient in its attitude toward industry, and pursued a policy of almost complete *laissez faire* in allowing unrestrained exploitation of the country's resources by the individualistic industrialists. However, artificial aid was rendered to manufacturing by a system of protective tariffs. Although protection has not been a material factor in expanding the production of wealth, it did speed the growth of certain infant industries and yielded large profits to more securely established lines.

INDUSTRIAL REVOLUTION IN THE UNITED STATES

If the term "Industrial Revolution" implies the displacement of an old system of manufacturing by another, thereby creating many industrial maladjustments, as was so apparent in England, the term cannot be applied to the development of industry in this country. Scarcely any system of manufacturing existed to be displaced, as only a few specialized handicraftsmen and the merest beginnings of a domestic putting-out system had appeared. But if the Industrial Revolution signifies the introduction of mechanical processes and the application of power to machines, the United States experienced such a revolution between 1825 and 1875.

Once begun, the process of mechanization spread rapidly and this country passed from household industry to factory industry in fifty years and accomplished what had required a much longer period in England.

Technological Changes. The years from 1780 to 1810 may be considered as a period of experimentation upon the new English machines. Despite legal restrictions and prohibitions upon their departure, skilled mechanics were emigrating to this country, bringing ideas and plans. During this period a few small cotton spinning factories appeared, using either water or steam power.

It was in the period from 1810 to 1850 that the foundation was laid for the future industrial structure. Thousands of inventions were patented by ingenious Americans, who adapted English machines to American conditions and created new methods. As in England the manufacture of cotton textiles was the first to be revolutionized in this country, and its development, along with English competition, reduced the price of cotton cloth sheeting from forty cents a yard in 1815 to two cents in 1860. In many factories all the various processes of carding, spinning, weaving and finishing were assembled together under one roof to save labor costs and transportation charges. The mechanization of the woollen industry took place more slowly, mainly because of English superiority, but by 1860 it, too, was largely concentrated in factories.

Improvements were being introduced into the iron

industry but it was not until the invention of the hot blast in smelting that production rapidly increased. In the fabrication of finished metal products Americans made the greatest contributions. As early as 1807 Eli Whitney began to work on the principles of standardizing parts and interchanging mechanisms. The idea, first applied with much success to the manufacture of fire-arms and clocks, was soon adopted in many lines. Undoubtedly it was the principal cause of American superiority in the production of small metal articles, farm and textile machinery, and other heavy products.

The invention of the sewing machine not only proved to be a boon to the housewife but also eventually revolutionized the clothing and shoe industries. Machinery was applied in several lines of the woodworking industry, and factories appeared therein before the Civil War. And yet even at the middle of the century, the factory system in many lines was still in its infancy. Small plants were widely diffused throughout the country, household methods existed on the frontier, and in various localities the domestic system continued in certain industries.

It was during the latter half of the century that the factory system of manufacturing really became predominant. In the North the Civil War furnished a strong stimulus and accelerated the development that already had begun. Mechanized processes were introduced wherever possible, steam power was applied throughout nearly all industry, and the value of manufactured products multiplied rapidly. By 1900 their

value was several times that of agricultural commodities, and the United States was the foremost industrial nation of the world.

Effects of Industrialization. The general effects of this industrialization were felt by every inhabitant of the country. As a result of the greatly reduced prices of manufactured products, the general standard of living was raised everywhere, though unequally in different sections of the nation. Population became more concentrated in industrial urban centers, and a greater geographical specialization in manufacturing developed in the North and Middle West. This led to an enormous increase in domestic trade and changed the complexion of our foreign commerce.

The immediate effects upon labor conditions were unusual, for there was little of the hardship and poverty that accompanied the Industrial Revolution in England. No entrenched system existed in the United States to be destroyed, bringing distress to its dependents. As previously indicated, cheap western land caused wages to be high, and provided an outlet for unemployed eastern laborers during periods of depression. The demand of a rapidly increasing population prevented the introduction of labor-saving machinery from displacing workers permanently, and it also kept production and employment from being interrupted for any extended period of time.

Conditions of employment were never so disgraceful here as in England. Although many girls and women worked in the factories, relatively few young children were employed, and better living conditions prevailed

in the factory towns. Hours were long, but the factories were somewhat less unhealthful and unsanitary. The establishment of the industrial system was not without its abuses, however, and some of these will be described in a later chapter.

C H A P T E R X I

Agricultural Revolution

BETWEEN the middle of the eighteenth century and the end of the nineteenth, methods of farming that had been followed for thousands of years throughout the world were completely transformed in England and the United States. Although these changes did not produce the far-reaching effects that accompanied the Industrial Revolution, nevertheless the metamorphosis in agriculture can be termed indeed revolutionary. The resulting expansion in farm production not only fed the rapidly increasing population of England and America, but also furnished vast quantities of raw materials for the machines created by the revolution in manufacturing.

TRANSFORMATION OF ENGLISH AGRICULTURE

In 1700, despite some improvements in their methods, English farmers continued to follow the wasteful

three-field system of rotation and to use the crude medieval agricultural implements. The first half of the eighteenth century saw the beginnings of a more scientific agriculture, but the improvements did not become widely adopted until the latter part of the century. The knowledge and practice of better methods spread slowly, retarded not only by the isolation resulting from the inadequacy of contemporary means of transportation and communication, but also by the reluctance of the conservative farmer, bred in generations of tradition, to accept innovations. Furthermore, the adoption of most of these improvements required the investment of more capital than the average small farmer possessed.

Improved Methods and Machines. Outstanding improvements in farming during this period included the introduction of new crops, the improvement of livestock through selective breeding, the adoption of more scientific methods of cultivation, and the invention of more efficient machinery. Among the early innovations were the introduction of clover, turnips, or similar crops in a new rotation, which, by restoring the fertility of the soil, made unnecessary the practice of keeping one third of the land lying fallow and idle. The method of deep plowing was adopted, and this, by mixing the rich sub-soil with the light, sandy surface soil, made possible the future conversion into fertile wheat land of several hundred thousand acres of heath.

It was in this period also that the breeding of livestock began to receive attention. As a result of careful

selection and ample feeding, sheep were produced weighing over seventy-five pounds, which was more than double the average weight of the time. One well-known stock breeder made a goodly income renting his animals for breeding purposes, one prize ram earning twelve hundred guineas in a single year. The breeds of horses and cattle were also generally improved, and soon the supply of English meat increased threefold. Most of these early experiments and improvements were carried on by gentlemen farmers, who thus laid the basis for England's later supremacy in stock breeding.

By the end of the eighteenth century the work of these pioneers was continued on a broader front. A government Board of Agriculture was established to gather statistical and other information and to disseminate it throughout the country. The interest in scientific farming was so aroused that many societies were formed, shows were held and prizes offered for the best exhibitions. It became the fashion to farm, and even King George III wrote agricultural articles for farm journals under the pseudonym "Farmer George." The diffusion of agricultural knowledge resulted in tremendous progress. Not only were better methods adopted, but farms were enlarged, capital was invested in land and drainage, implements were improved, and fertilizers were more generally used.

The final phase of the Agricultural Revolution was the introduction of machinery, which began on a large scale during the first half of the nineteenth century. Many of the important early developments in the

use of agricultural machinery occurred in England, although the use of machinery as a whole has been far more important in the United States. Early in the eighteenth century, a drill for sowing seeds in rows had been introduced by English farmers, together with a "horse hoe", or cultivator, that reduced the labor of growing field crops. In the following hundred years, the use of agricultural machinery developed rapidly, with the invention of mowing machines, horse rakes, threshers, and improved plows. Although steam plows appeared about the middle of the nineteenth century, horsepower remained the principal source of power for the new machines until well after the beginning of the twentieth century.

Revival of Enclosures. Such changes as occurred in English farming between 1750 and 1850 could not have taken place under the old three-field system. On such small, scattered holdings, improved crops and better methods could not be introduced, proper drainage and fertilization could not be undertaken, and larger implements and machinery could not be profitably utilized. The custom of grazing stock in common also prevented improvements in stock breeding.

Thus the combining of open fields into single large areas was a necessary prerequisite to improvement. It is not surprising, therefore, that the rise of large-scale, capitalistic farming during the eighteenth and nineteenth centuries gave a new impetus to the enclosure movement that had begun during the sixteenth century and continued at a reduced pace throughout the seventeenth. The movement proceeded rapidly during

this period from 1750 to 1850, until nearly all of the old open fields and common lands had been enclosed into individual unit farms of the modern type. At that time the movement slackened as a reaction arose against the excessive amount of enclosing, which in some instances had been carried so far as to include parks and forest preserves.

Effects of Enclosures. The enclosing of farm land was an essential and inevitable step in the transformation of English agriculture to its modern state, for only on large holdings could the new capitalistic methods of cultivation be applied profitably. Enormous progress followed the enclosures and for a time England was the most advanced agricultural country in the world. Although the ultimate effects, in the main, were beneficial, there were also some less fortunate transitional results. The poorer rural classes particularly suffered from the changes. They had formerly used the common pastures for their sheep, pigs and poultry, although it was an extra-legal privilege established through custom. The enclosure of the common and waste lands deprived these people of their privileges and, by making difficult the ownership of livestock, further impoverished them.

The small farmers with a few acres usually suffered also, because only the large landowner or wealthy tenant could supply the heavy capital outlay now required for successful farming. Therefore the smaller tenants and freeholders were eventually forced to relinquish their land to the wealthier group. Similarly the rural domestic craftsmen, who had usually supple-

mented their industrial earnings by farming a small area of land, found themselves being crushed out of existence between two simultaneous revolutionary movements. On the one hand, the growth of the factory system eliminated them as skilled handicraftsmen and, on the other, the rise of large-scale capitalistic farming either deprived them of their land or reduced their effectiveness as farmers. Most of them either became hired agricultural laborers on the large farms or drifted to the cities to enter the factories as industrial employees.

The conclusion of the enclosure movement left the rural population stratified into three distinct classes: landowners, tenants, and landless agricultural laborers. The concentration of landownership had progressed so far as to place over half the land of England and Wales in the hands of less than five thousand persons. These landlords were of the upper classes, and though they frequently took considerable interest in their landed estates, they usually subdivided them into farms, averaging about three hundred acres, which were rented by tenant farmers. The latter, as a rule, were men with considerable capital and ability, who despite the high rents were able in good years to make a comfortable profit by employing advanced agricultural methods. The farmers hired as day laborers the third, and rather miserable, class who lived in cottages on the estates. Without land or property they existed on the meager wages they received, with little prospect of improving their condition as a class. Indeed, the destruction of the small, independent land-

holders constituted the most unfortunate aspect of the new system, and created social problems as yet unsettled.

Golden Age of English Agriculture. The full effects of the Agricultural Revolution were not felt in England until after the middle of the nineteenth century. But the subsequent period from 1850 to 1875 was so strikingly prosperous that it is frequently called the "golden age of English agriculture." The many improvements in farming methods were almost universally adopted during these years. More machinery was introduced, the most scientific methods of cultivation were followed, artificial fertilizers were widely used, drainage was extended, and accordingly larger amounts of capital were invested in the land. As a result English agriculture achieved an excellence of intensive production that the world had never before witnessed.

But in the middle of the decade of the 1870's the prosperity began to decline, and a prolonged depression fell upon English farming. The principal cause was the increased competition from America, for the rich lands of the Middle West could be cultivated so cheaply that American farm products flooded the European markets at extremely low prices. This new source of food supplies was made available by the revolution that had occurred in the transportation industries, and by the rapid increase in the area of land under cultivation that accompanied the westward movement of population in America.

DEVELOPMENT OF AMERICAN AGRICULTURE

The development of agriculture in America did not as closely resemble its English counterpart as was the case with industry. From the very beginning it was molded by a different environment, for the conditions of pioneer life created different problems and new methods of meeting them. Early colonial agriculture was based on a combination of Indian methods and seventeenth-century English agriculture. The contribution of the latter was meager, consisting principally of a very limited number of crops and extremely crude tools. From the Indians, on the other hand, were obtained such new crops as the essential food product, maize or corn, and the highly marketable tobacco. Probably even more important is the fact that the Indians taught the colonists the methods of cultivation that were most effective in the new country.

The existence of vast areas of cheap fertile land led naturally to the adoption of a very extensive type of agriculture, in which land was freely used and little effort was expended to increase the yield per acre. On the other hand, the relative scarcity of labor led farmers to employ any process that conserved human effort and increased the output per man. The productive capacity of labor was limited by the scarcity, the small variety, and the poor quality of agricultural tools and

other capital equipment. Therefore, a more prodigal use of land was necessary wherever such use could reduce the amount of labor or capital required for production. The abundance of land, the scarcity of labor, and the paucity of equipment account for the two major developments in American farming: the westward expansion of agriculture and the revolution in agricultural methods.

WESTWARD MOVEMENT

Nature of the Migration. The movement of population westward to occupy the vast areas of uninhabited land not only determined our agricultural development, but it also affected our industry, trade, transportation, and monetary policies. In addition, it dominated the political and social issues of the country and shaped the psychology and philosophy of American life. The devotion of energies to the task of settling the continent gave the country a national unity, and at the same time separated the interests and distinguished the economic conditions in America from those of Europe. Without doubt the migration was the most amazing in history; for example, in the single decade from 1870 to 1880 over two hundred million acres, an area as large as Great Britain and France combined, was put under cultivation. The people who settled this vast area came from two sources. Native Americans from the East and South surged westward, and immigrants, principally from northern European countries, came over by the hundreds of thousands.

In general, the westward movement occurred in

stages, as different types of settlers followed one upon the other. The pioneer trappers, traders and miners, who blazed the first trails and opened up the wilderness, for the most part moved onward with the arrival of farmers. The latter cleared the land for cultivation, living a relatively rough and rugged existence, until more settlers arrived and gradual improvements in homes, roads and farming methods made possible a higher standard of life. At favorable locations towns arose, trade and industry increased, and modern community life emerged.

Economic conditions, to a large extent, determined the speed of the migration westward. The movement was stimulated during periods of depression and hard times, as people sought to improve their conditions by going West, inspired by the lure of cheap land on which to apply their labor. However, during periods of prosperity there was less pressure to leave home (whether in the East or in Europe), and the movement was slower.

Causes of the Movement. The causes of this enormous migration of people were largely economic. Although some European emigration occurred because of religious or political persecution, most of it resulted from the desire to seek better fortunes in the bounteous West. Indeed, after the Civil War, many railroads conducted advertising and recruiting campaigns in various European countries to attract immigrants to settle along their rights-of-way. Certainly the motive of economic gain was predominant in the minds of eastern Americans. A tendency always exists for peo-

ple to migrate to areas where resources are plentiful, labor is scarce, and the standard of living can be raised through exploiting the natural wealth.

The land policy of the federal government also hastened this rapid conquest of the continent. As soon as the original states had ceded their western lands to the central government, a conflict arose over the policy to be pursued in disposing of the public domain. On the one hand were eastern groups who wished to restrict the sale of the land, fearful that westward expansion would injure the interests of the seaboard; on the other hand were land-hungry westerners, demanding that the land be sold in small low-priced plots to enable settlers to buy land, build houses, and develop the country. Victory went to the latter group, as a series of laws made simpler and less expensive the acquisition of land. Finally, the real rush to the West began with the passage in 1862 of the Homestead Act, which granted 160 acres of land free to any citizen living on it for five years.

Earlier, land speculation played a considerable role in the westward movement. During a land boom in the 1830's, large tracts of land were plotted off and sold and resold, sometimes for as much as fifty times the original prices. This element of speculation was frequently a motive in the minds of farmers going West, for they hoped not only to make a good living on the land but also to be able to sell out at a profit and move on to repeat the process.

Effects of Westward Movement. As already indicated, the effects of this westward migration of people pene-

trated every part of the economic system. Its most evident result was the growth of population and the increase in the productive capacity of the country. The proportion between the population and resources of a country determines the general level of its standard of living. If the population increases more rapidly than the productivity of a country there is a decline in the living standard, and a historical condition of diminishing return exists; that is, per capita income declines. On the other hand, if the production of a country increases more rapidly than its population, the nation enjoys a period of increasing returns. The latter situation existed in this country during the nineteenth century, for despite the very rapid growth in population, its productivity increased to an even greater degree.

However, the rapid appropriation of the public domain was accompanied by a reckless exploitation of lumber and minerals as well as of land, and there is some doubt whether the ultimate welfare of the country might not have been served better by a more moderate policy of conservation. The existence of cheap unoccupied lands led to the widespread practice of "land butchery"; thus, a plot of land was frequently used for several years without rotation or fertilization until its fertility was destroyed. It was cheaper to do this and then move on to new land than to devote expensive labor and costly capital to a form of cultivation that would maintain unimpaired the productive capacity of the old land. In the eyes of later generations this may seem to have involved

a callous disregard for the welfare of posterity, but it is necessary to remember that, at the time, the natural resources that were being exploited seemed truly limitless. And, for good or ill, it greatly stimulated the expansion of the country.

The westward expansion affected eastern interests in diverse ways. Eastern farming was injured by the migration, because the inflow of cheap western products lowered the prices of certain farm commodities and caused an even greater depreciation in many eastern land values. Moreover, many of the most progressive farmers were attracted to the West, agricultural laborers were scarce, and many farms were left to deteriorate. On the other hand, the rapidly expanding western population created large markets for eastern manufactured products, thus stimulating the development of industrial urban centers.

The economic interests of the westerners had a profound effect upon the policies of the federal government. American monetary history was greatly affected by the demands of the western farmers, who also were instrumental in securing the passage of laws to regulate business and railroads. The westerner was usually in debt to the eastern capitalist, either directly or else indirectly through the borrowing by western governmental bodies. As a result there existed a continual conflict between the two classes of debtors and creditors over monetary and financial issues.

Regional Specialization. One of the most important consequences of the westward movement was the impetus it gave to specialization by different sections of

the country in the production of various types of commodities. In the extension of agriculture into the Middle West, the rich land beyond the Appalachian Mountains was first occupied, and the cheaply grown grain and meat products were carried to eastern and southern markets over the natural waterways. But the real development of this territory came with the building of canals, highways, and later the railroads. Before this the freight rates had been high, and only lightweight, valuable products could reach the eastern markets. Some grain was made into whiskey, and corn was fed to hogs which were either driven to markets or shipped in barrels after being slaughtered. But with the improvement in transportation facilities and the expansion in demand for western food products by the East and South the region developed quickly, and became the granary of the country. The coming of the railroad made possible the rapid spread of population beyond the Mississippi into the prairies of the Central West, where water transportation was impossible.

Wheat and corn became the two principal crops in this area. Dependent upon the use of corn for feed, the production of hogs and beef cattle also came to be a major industry of the corn belt. The meat-packing industry followed agriculture into the West, and later it was greatly stimulated by the introduction of refrigerating devices which made possible the packing of meat the year round and its distribution as demanded for consumption. The dairy industry likewise shifted westward with the development of the corn belt and the growth of middle-western cities. Much of

the milk produced found its way to market in the form of butter and cheese, the production of which eventually became concentrated, to a large extent, in factories in the cities of the dairy-farming areas. In the more arid regions of the Far West, cattle raising continued despite the enclosure of much of the pasture ranges by homesteaders. On the Pacific Coast a varied agriculture developed, ranging from wheat growing and sheep raising in the north to the production of fruits and vegetables in large quantities in the warmer southern valleys.

Agriculture in the East was largely self-sufficient until the beginning of the nineteenth century. Then the increasing industrialization of the New England and Middle Atlantic states led to a rapid growth of the towns and cities, thus affording larger markets for agricultural products. To meet this demand, the surrounding farming sections began at first to specialize in the production of staple products such as grains, livestock, and similar foodstuffs. However, the building of the early canals and railroads brought low-cost western commodities into eastern markets, where they could be sold much more cheaply than much of the locally grown grains and meats. Consequently, eastern farmers near industrial centers shifted to the production of vegetables, fruits, and dairy products for adjacent city markets. In this respect, they followed the same course as that adopted later by many English farmers, and engaged in a more intensive cultivation of land than formerly.

One of the most spectacular features of agricultural

development in the United States during the nineteenth century was the rise of cotton to supremacy in the South. The most important obstacle to the growth of the industry, the difficulty of cleaning the seeds from cotton fiber, was overcome in 1793, when Eli Whitney invented the first successful cotton gin. Probably few other inventions have produced greater effects upon American economic life, or indeed that of the world. By hand, one man could clean a pound of cotton a day; using a hand-power gin, he could remove the seeds from fifty pounds; operating a gin run by water power, he could clean a thousand pounds or more. Cotton soon became the leading export of the country, primarily because the mechanization of the English cotton textile industry, coupled with the radically reduced cost of the raw cotton, created an almost insatiable market for cotton cloth. Specialization by the South in this one staple crop led to a large demand for the industrial products of the North and the food of the West, thus stimulating still further the development of both of those regions.

Gradually, the center of cotton culture moved westward until it became located in the southwestern states beyond the Mississippi River, although cotton has nevertheless remained a basic crop in the southeastern states in which it was once supreme. Tobacco also became an important crop in the South at an early date, and with the continued expansion of both domestic and foreign demand for it, tobacco production increased until this country became the world's largest producer.

Thus, exemplifying in action the economic doctrine of "comparative advantage", each section of the country tended to specialize in the production of commodities that it could produce most cheaply, and, by selling its goods to the other regions, each was enabled to purchase from the others on favorable terms the commodities that it needed.

REVOLUTION IN AMERICAN FARMING

During the same time that agriculture was expanding westward and becoming more specialized, fundamental improvements were being introduced in farm machinery and methods in this country. The rapid growth of population from over five million in 1800 to about twenty-five million in 1850 and to approximately seventy-five million in 1900 exerted increasing pressure on agriculture to expand production. Foreign demand for cheap American farm products also stimulated output. As land was relatively plentiful, the problem confronting the farmer was to secure greater production per man. This stimulated the invention of labor-saving machinery, and in the latter half of the nineteenth century the United States took the lead in introducing and applying machinery to agriculture.

Until 1830, with the exception of plowing and harrowing, nearly every process in preparing the soil, planting the seeds, tending the growing plants, and harvesting the crops was performed by hand with the crudest of implements. Within the short period of fifty years machinery was applied to all of these tasks, and methods of farming that had continued for thousands

of years were revolutionized. The Agricultural Revolution consisted not only of the mechanization of farming, but also to a minor extent, as in England, it included the application of more scientific methods and the spread of agricultural knowledge.

Introduction of Machinery. Early efforts to introduce iron plows had been opposed by farmers who believed that the iron poisoned the soil and injured the crops. However, by 1830 iron plows were in general use, and were followed during the century by steel plows, sulky or riding plows, and gang plows. Comparable improvements appeared in harrows, planting machines, and cultivators, all of which multiplied several-fold the efficiency and productivity of farmers.

Improvements in planting and cultivating made imperative better methods of harvesting, particularly in the grain crops, where harvesting must be completed in a short period of time. Here, American inventive genius was especially effective. In 1834 Cyrus McCormick secured a patent for a reaper, and in twenty years over ten thousand were in use. Several rather ineffective mechanical binders were introduced to supplement the reaper, before the highly efficient twine binder appeared. By using it one man could do the work of eight hand binders, and wheat production thus was enabled to expand practically without limit. Grain must also be threshed before it can be marketed. Until about 1830 this was done usually by hand with a wooden flail, after which the grain was tossed in the air for the chaff to be blown away by the wind. Finally, a successful thresher was invented which separated and cleaned

the grain over a hundred times as rapidly as threshing by hand.

With the exception of threshing machinery, practically all of the farm implements developed during the nineteenth century depended on animals for power. Thus in 1900 there were twenty-five million horses and mules on American farms furnishing power for farm machinery that was valued at approximately a billion dollars.

Effects of Mechanization. Only a few of the many effects of this rapid and radical mechanization of agriculture will be indicated. The great increase in physical productivity is obvious. Operating a machine a farm laborer could produce from two to a hundred times as much as he could by hand, and the problem of labor scarcity was largely solved. Moreover, the average cost of production was only about one fourth as much as formerly. The total production of our most important crops increased five- or sixfold from 1850 to 1900, and the average size of the farms more than doubled. Owing to the large increase in per capita production, the percentage of the total population engaged in agriculture declined, despite the tremendous expansion in total output.

Agricultural productivity was greatly increased, wages were higher, and rural living standards improved. Farm labor was less onerous than before, for machinery had relieved human muscles of much of their fatiguing burden. On the other hand, as more equipment became necessary for successful farming, and as land values rose, tenancy expanded and the

landless class of agricultural laborers increased. The introduction of machinery, however, did not cause a more careful and intensive cultivation of land, but on the contrary stimulated wasteful cultivation of many large areas.

Scientific Methods. Another aspect of the Agricultural Revolution was the application of more scientific methods to farming. As technical improvements usually mean more intensive cultivation, they have not been a prominent feature of the transformation of agriculture in this country. However, the progress made in many lines increased the efficiency of our extensive methods of cultivation. As in England, the improvement of methods was first undertaken by gentlemen farmers, such as Washington, Jefferson and others. In fact, Washington applied so much of his land to intensive—and therefore relatively expensive—utilization that his estate was financially unprofitable.

During the nineteenth century farming technique was improved in various ways. The practice of rotating crops spread rapidly, and experiments in rotation were conducted with various crops. A second improvement was the increasing use of manure and other fertilizers, although the practice by no means became general. In fact, in many instances, farmers did not use manure, but moved their barns and other buildings in order to be clear of the accumulating piles of animal waste. Of great importance also were the improvements in the breeding of livestock, which were begun by the importation of famous foreign breeds by the larger farmers. Merino sheep, Durham cattle and thorough-

bred horses were imported before 1800, while the finest asses of Europe were sent by Lafayette to Washington, who became the founder of the mule-raising industry in this country.

The Agricultural Revolution was promoted by the dissemination of knowledge of the new machines and other farm information. This was accomplished, during the first half of the nineteenth century, chiefly through agricultural societies, fairs, and farm journals. These agencies were supplemented after the Civil War by the rise of agricultural schools and the development of government activities designed to promote agricultural progress.

Summary. As a result of the revolutionary improvements, the agricultural sections of the country not only produced abundant supplies at low prices for domestic consumption, but also during the latter half of the nineteenth century became the principal granary of Europe. The transformation of farming from hand methods to machinery, from human power to animal power, and from local self-sufficiency to specialized production of commercial crops brought increasing prosperity to the American farmer. He possessed an abundance of foodstuffs and the necessities of life, and was able to purchase many of the improved manufactured articles that were being produced cheaply in large quantities as a result of the Industrial Revolution. He had created the means for enormous production and enjoyed the highest standard of living of any farming class in the world.

Although English agriculture resembled American

in the introduction of improvements and the increased specialized production for sale in the market, nevertheless there were many elements of contrast between farming in the two countries. As land in England was scarce relative to the labor supply, methods of cultivation were more intensive than in this country, and the output per acre was much greater. Although machinery was utilized in England when profitable, it was not so necessary as in this country, where labor-saving devices were adopted widely to increase the output per man. Finally, the agricultural classes and the form of land tenure were different in the two countries. In England most of the land was held by large landowners, who leased much of their land to well-to-do tenant farmers. Both landowners and tenants hired agricultural laborers, who constituted the lowest rural class. By the latter part of the nineteenth century in America, on the other hand, most of the land was owned by individual farmers, who hired agricultural laborers in small numbers.

CHAPTER XII

Transportation and Trade

THE unprecedented technical progress in manufacturing and agriculture, during the period from 1750 to 1850, was accompanied by equally important improvements in the transportation and marketing of goods. The distribution of the greatly increased supply of cheaper products would have been impossible without the development of new agencies of transport by water, highway, and rail. This chapter will describe the expansion and improvements occurring in transportation and trade during this century in England and America that made possible the growth of more extensive geographical specialization of labor.

TRANSPORTATION

HIGHWAY TRANSPORTATION

As previously indicated, the roads of England for centuries were little more than paths, over which even

high-wheeled carts passed with great difficulty. However, as early as 1663, under special acts of Parliament, private individuals grouped themselves together into "turnpike companies" to invest capital in the improvement of strategic sections of roads. These companies were thus named because bars or pikes placed at each end of the road were turned to allow travelers paying the tolls to use the road. These turnpikes spread rapidly toward the end of the eighteenth century. Although considerably improved, the roads were usually in unconnected sections and frequently poorly maintained; their condition is indicated by the contemporary report that on one occasion the royal coach containing George II and his queen overturned outside London.

Toward the end of the eighteenth century such men as Telford and MacAdam revolutionized methods of road construction. They built hard-surfaced roads, using crushed rock bound together with tar laid on a solid foundation, with the top of the road curved slightly to ditches on each side to insure drainage. (Previous roads had sloped from the sides toward the center!) One such type of road still bears the name of its originator, MacAdam. During the nineteenth century, roads were further improved and connected into long systems, so that travel was expedited and animals were enabled to haul several times as much as formerly. By the middle of the century privately operated turnpike companies disappeared as the maintenance of the roads was taken over by local and central governments.

In the American colonies, the Indian trails were usually improved, and at an early date several roads were

constructed. The roads were crudely built, and travel upon them was uncertain, dangerous, and usually impossible in winter. The few existing wheeled vehicles were also crude and uncomfortable, and transportation rates were so high that traffic was limited to passengers and to valuable products of small bulk.

In the United States, as in England, the first improved roads were constructed by private turnpike companies. They were usually promoted by people in the back country who needed facilities to transport their products to the seaboard towns. The promoters hoped thereby to increase the value of their lands, and also to reap large profits from the collection of tolls. The first such highway of any considerable length and importance was the sixty-five mile Philadelphia-Lancaster turnpike, which was completed in 1794. This road proved so successful that hundreds of turnpike companies were formed and constructed thousands of miles of roads, many of which were excellently built. By 1820 all of the states possessed such roads.

Most famous of all the roads was the Cumberland Road or the National Pike, which extended 834 miles westward from Cumberland, Maryland. Built with funds of the federal government, it was begun in 1811 and completed in 1839. It became the most important thoroughfare to the West, both for the migration of people and the transfer of freight. Freight rates between points along its route were decreased over fifty per cent below former charges, and the time of travel likewise was reduced one half.

The roads facilitated greatly the movement of people into the region beyond the Appalachians, and helped to bind the new states together both politically and economically. Although greatly reduced, freight rates remained too high to allow the transport of goods, especially bulky goods, over long distances. Nevertheless, the growth of towns and cities was stimulated by the advent of roads, and much rivalry was exhibited among eastern cities to tap the inland areas.

Although the roads brought many advantages, they also raised new problems. For the most part they were regarded as monopolistic, for they usually charged what the traffic would bear, and the people along the route were at their mercy. By the rate of toll charges imposed, a turnpike company could "make or break" a striving community. The public nature of the roads was therefore early recognized, and regulatory provisions, though seldom enforced, were usually included in their charters.

WATER TRANSPORTATION

Highway transportation, at its best, was a slow and expensive method of getting goods to market. Water transportation was considerably cheaper, and enterprisers in both England and America promoted the rapid construction of canals and the building of steamboats in order to profit from the anticipated increase in commerce. This effort reached its fruition in an era of canal building and in the eventual adaptation of steam power to water transportation, which first occurred in the river and coastal trade. More distant ship-

ments of goods were facilitated by great improvements in sailing vessels and by the later application of steam power to ocean-going ships.

Canals. In England the era of canal construction occurred contemporaneously with highway improvements. Although a few canals had been built earlier, the movement really began with the completion of the twelve-mile Bridgewater Canal in 1761. This canal, involving the construction of an aqueduct six hundred feet long over the Irwell River, was considered one of the engineering marvels of the time. It reduced by over fifty per cent the cost of carrying coal to Manchester from the collieries at Worsley. Its success inspired the construction of scores of additional canals, so that by 1830 the network covering England connected all the principal cities. Even more than the new roads, the canals aided the development of the country, for upon them coal and iron, building materials, pottery, and bulky agricultural products could be transported cheaply from the inland towns and districts to the seaports. In fact, traffic became so heavy upon the principal routes that efforts were made, without great success, to speed traffic and relieve the congestion by applying steam power to the barges. However, the arrival of the steam railways solved the increasing difficulty of the transportation problem, and the canals declined rapidly in importance after the 1830's.

In the United States, despite widespread use of turnpikes, rivers, and coastwise shipping, the earlier transportation facilities remained inadequate, especially between the East and the West. However, the problem

of securing a cheap and direct East-West route was partially solved by the construction of canals. The opening of the Erie Canal in 1825 ushered in a fifteen-year period of rapid canal building. The Erie, constructed by the State of New York, proved to be an immediate success, paying for itself in a few years. Its effects were instantaneous and far-reaching. It brought prosperity to the towns and territory along its banks, it opened up the West to eastern industrial products, and more important, it furnished an outlet for the bulky farm products of the Middle West. Freight rates from Buffalo to New York dropped from \$100 to \$5 a ton, and the transport time was reduced from twenty days to six.

Although eastern farmers suffered to some extent because of the competition of the now cheaper western commodities, the West was now bound to the East and the development of both along more highly specialized lines was accelerated. Under these circumstances New York enjoyed a rapid growth as an entrepôt and soon became the principal city and seaport of the country.

More canals were soon constructed in the East, usually to connect existing waterways or to tap the western region. But the real mania in canal building occurred in the Middle West, where with great abandon rivers and lakes were united by a network of canals. Like the Erie Canal, the new waterways profoundly affected the economic and social life of the sections they served; rates and travel time declined and markets expanded; production was greatly stimulated, and domestic trade

increased as a more specialized regional division of labor became possible.

The canals were financed principally by the states, although the federal government frequently assisted with land grants. To make these internal improvements, several of the states issued bonds, most of which were purchased by European investors. The development of internal improvements (canals, roads, banks and railroads) proceeded at such a rapid pace that a period of intense speculation resulted, accompanied by much wasteful and useless construction as well as graft and fraud in the issue of securities. This activity was a contributing factor to the crisis of 1837, which put a stop to the state projects. In the subsequent financial debacle, several states repudiated their debts, and most of them withdrew from the field of public works.

River Traffic. Likewise in the second quarter of the nineteenth century steamboats appeared on all navigable rivers and upon the Great Lakes. This use of steamboats opened a vast system of internal waterways for transportation purposes, giving to those regions along the rivers a cheap and rapid means of transport. Travel time between points was reduced remarkably; for instance, by 1840 only thirty days instead of one hundred (in 1810) were required to get from Pittsburgh to New Orleans. The concurrent lowering of rates made market expansion more rapid. The settlement of the West particularly was hastened by the steamboat, for hundreds of thousands of homeseekers annually steamed westward to seek their destiny. Likewise, steam-

boat traffic on the Mississippi River, which for a time made New Orleans the most important port in the country, formed a strong connecting link in uniting the economic interests of the West and South.

Ocean Transportation. During the first half of the nineteenth century American shipyards were busy, and the American merchant marine was expanding, for this country possessed a very decided advantage in building ships. In New England wood was plentiful and available near the seacoast, many excellent harbors existed, and labor, though expensive, was very superior in skill. Ships could be built better and more cheaply than in any other country. The golden age of American shipping culminated in the middle of the century with the clipper ship, the triumph of American shipbuilders and the fastest commercial sailing vessel ever constructed.

Despite the amazing speed and success of the clipper ships, their glory was short-lived, for they could not withstand the revolution that was occurring in oceanic shipping. Steamboats began to displace sailing vessels, and iron was substituted for wood in their construction. England possessed a decided superiority in building iron steamships, and American wooden sailing vessels steadily declined in importance. Moreover, Americans could secure larger incomes by migrating westward, with the rapid extension of rail and canal transportation facilities, so that shipping companies could not afford sufficiently high wages to hold them; consequently we lost our advantage in operating ships to Scandinavian and English seamen. As the construction

and operation of ships became less profitable, the investment of capital was shifted to manufacturing, internal transportation, and the development of natural resources, where larger returns were obtainable. Although this country has never since attained the supremacy in merchant shipping possessed in the early nineteenth century, our foreign trade has continued to expand under the stimulation of low rates offered by foreign shipowners.

Used at first for river and harbor traffic, steamboats were rapidly improved and enlarged, until in 1819 the *Savannah*, employing both steam and sails, crossed the Atlantic in twenty-nine days. It is said that when she was leaving England, government sailing vessels chased her for a day in the belief that she was on fire. By 1850 steamship lines from England to all continents and most countries had been established, and tramp steamers were seeking cargoes in every port.

These early English companies that operated ships on regular schedules were aided by government mail subsidies. Although this policy was in violation of the generally held *laissez-faire* theories of the time, it was considered necessary in order to assure the furtherance of English trade with the rest of the world. As a result of her leadership in ocean transportation, England expanded her merchant marine until at the beginning of the twentieth century her ships were carrying half of the water-borne commerce of the world.

Freight rates were more stable and had fallen to less than one fourth of the former charges. Speedy, certain transportation throughout the world on regular sched-

ules reduced the investment of capital in goods while in transit and in warehouses. Countries were brought closer together, nations became interdependent commercially, and the world was unified by an international economy.

RAIL TRANSPORTATION

Highways and canals facilitated greatly the local transportation of goods, but both agencies were slow and expensive; moreover, both were likely to be impassable during the winter months. These obstacles to trade were overcome, however, by the development of the railroads.

Development of Railroads. The origin of railway development in England can be traced to the coal mines of the early seventeenth century. To transport coal from the mouth of the mine to the nearest navigable stream, parallel planks were laid to form a track, over which wagons of coal could be drawn more easily. About 1800, a short railroad with iron rails was built for general public use in carrying freight, tolls being charged shippers for the use of the tracks in hauling freight in their own private conveyances. After the completion of the twenty-five mile Stockton-Darlington Railway in 1825 passengers were carried, first by private coach companies, and later by the railroad company itself.

These early railway cars were pulled by horses, but experiments were being conducted with mobile steam engines, despite the general belief that a smooth wheel would merely spin on a smooth rail. After several

failures, George Stephenson finally constructed the successful *Rocket*, which in 1829 attained a maximum speed of twenty-nine miles an hour; soon steam locomotives were in general use. The first passenger fares were seven cents a mile. At first there was much public opposition to these fiery monsters; it was argued that they would burn up houses and crops along the tracks, frighten the livestock and poultry, poison the air, and endanger the lives of passengers by such speed. However, Stephenson's success engendered a boom in railway construction, and by 1850 seventy-five companies, with over 5000 miles of lines, were carrying twenty-five million passengers annually. At the same time short local lines were being connected and consolidated into unified trunk-line systems throughout England.

The results of the development of the new means of transportation were apparent on every hand. The spread of this railroad net over the country offered shippers a cheap, efficient method of transporting their products. Inasmuch as miners, manufacturers, farmers, and merchants could send and receive products punctually, swiftly, safely, at any time, production was greatly facilitated. Moreover, since productive activities formerly unprofitable could now be undertaken because of lower transportation costs, both the interior and coastal sections developed rapidly and towns and cities multiplied their population. Of course, the privately owned turnpikes and canals were hard hit, the former companies disappearing altogether and the latter declining greatly in importance.

The year 1830 marked the beginning of the railroad

era in the United States, but progress was rapid and lines were swiftly constructed in all sections of the country. Rails were laid with the same optimism and enthusiasm that formerly had accompanied the digging of canals. But the railroads enjoyed many advantages compared with the canals. They were cheaper to construct, they could be built directly between cities, they were less affected by weather conditions, and traffic could move more rapidly upon them. These advantages outweighed the single virtue of the canals, namely, the cheapness of rates due to the relatively low expense of current operation, once the canal itself had been built. Therefore, as the success of railroads became apparent the interest in canals waned, especially in those rather frequent instances in which the railroads obtained control of their waterway competitors.

The railroads were constructed by private corporations, the securities of which were purchased largely by European investors, but also by eastern capitalists as well as by merchants in the towns to be served by the projected roads. Much aid was rendered by states through subscribing to stock and guaranteeing bonds. The federal government also assisted with gifts of public lands to various states to be passed on as a subsidy to the roads. Although the soundness of this land-grant policy frequently has been questioned, there is no doubt that the development of the country was hastened by the rapid building of the railroads that obtained such aid.

The early short railroads usually served to connect

existing waterways or cities already having some commercial ties. However, competition among seaboard cities to reach the Middle West soon caused these local roads to be united into single trunk lines, and a more rapid development of railroads resulted. The New York Central Railroad, for example, was formed by combining numerous originally disconnected lines between cities along its route. Thus, in 1853, seven separate railroad companies operating between cities along the land route from Albany to Buffalo were merged with a number of others into the New York Central, making a continuous line from Albany to Buffalo. In 1869, the merging of a number of additional railroads with the New York Central brought about a through line from New York City to Chicago.¹

The advent of the railroads thus bound even more securely than the canals the economic interests of the West and the East, and contributed to a realignment of sectional interests, the South coming to be less closely connected with the West. The railroads furnished cheap and rapid transportation to vast areas otherwise inaccessible. And it may not be an exaggeration to say that the later greatness of the country can be attributed to the excellent system of railroads more than to any other single factor.

Attitude of the Government. The English railroads have never been subjected to a large degree of government control. In the beginning it was thought that they should be operated merely as public thoroughfares, on which private companies could run their

¹ Jones, Eliot, *Principles of Railway Transportation* (1925), pp. 49-55

cars and coaches upon the payment of a toll. This soon proved impracticable, and it was realized that the company which owned the tracks would have to operate the rolling equipment. The naturally monopolistic nature of the railroad industry thus became apparent. However, it was expected that the canals would furnish the competition that under the *laissez-faire* theory of the time was depended upon to protect the public. In fact, the first interference in transportation on the part of the government was to further canal competition by preventing their purchase and control by the railroads. It soon became evident, however, that more direct supervision was necessary in the public interest. In 1845 the Gladstone Act was passed, the two principal provisions requiring that daily third-class trains be operated for the poorer classes at a rate of a penny a mile, and that the companies could at any time be purchased by the government if it became necessary. Though never exercised, this threat may have led the roads to follow more moderate policies. Furthermore, from that time until 1921 a series of acts were passed establishing successive commissions whose chief function was to review the rates of the railroads for public protection.

In the United States, likewise, the people first placed their faith in competition as a regulator of railroads as of other methods of transportation. The policy followed, however, can hardly be called one of *laissez faire* because of the large government grants made for construction purposes. However, it was not until the 1870's that governmental regulation over rates and

practices was introduced. This will be discussed in a subsequent chapter.

TRADE

DOMESTIC TRADE

Increase in Specialization and Trade. In both England and America during this period the development of domestic trade was marked by a rapid expansion in volume, an increase in regional specialization, and the introduction of widespread improvements in marketing. As the degree of specialization in production depends upon the size of the market area over which goods can be sold, the most important factor in the expansion of domestic trade was the remarkable improvement in transportation facilities during the nineteenth century. Trade increased in both agricultural and manufactured products, for farmers and handicraftsmen could specialize in the production of goods in which they were most proficient, sell throughout the market area, and with the proceeds buy the other commodities they needed. The revolutionary developments that occurred in industry, agriculture, and mining accelerated this geographical specialization and also increased greatly the extent of individual division of labor. In both countries the absence of any local restrictions on the exchange of products also facilitated trade, and the fact that the United States included within its boundaries one of the largest free-trade areas in the world has been an important aid to its develop-

ment.² Furthermore, as a reliable medium of exchange is prerequisite to extensive trading, the establishment of a national monetary system in each country aided tremendously the growth of domestic commerce.³

In several respects the growth of internal trade in the United States during the first half of the nineteenth century differed from that in England. The comparatively high degree of economic self-sufficiency that characterized colonial life, especially in the interior, had retarded the development of a large distributing organization. This self-sufficiency was, of course, largely attributable to the great distances and geographical obstacles to intersectional trade. Moreover, the country was engaged largely in the production of agricultural commodities and raw materials, so that heavy bulky products constituted the major portion of the traffic and led to the development of types of marketing organization adapted to the handling of such staples. Finally, the development of internal trade in the United States differed from that in England, in that the United States included an expanding geographical area, and was affected, for nearly a century, by continuous contact with the frontier.

After the Revolutionary War internal trade developed enormously, increasing much more rapidly than foreign trade. The population of the country increased from about four million in 1790 to over thirty million in 1860, the most rapid growth over a similar area

² The Constitution of the United States prohibits any duties on interstate commerce.

³ See below, Chapter XIII.

during a like period of time in the world's history. Concomitantly, production and trade were multiplied many times. The movement of this population westward opened up new regions, created additional areas of specialized production, and furnished larger markets. In fact, the underlying cause of the entire expansion was the abundance and variety of rich natural resources that constituted the wealth of the country.

By the middle of the century three distinct regions of specialized production appeared: the East principally produced manufactured goods, the West food products, and the South raw staples. In the East-West trade the heavy, bulky grains and meats of the West were exchanged for the eastern manufactured articles of high value, but the purchases of the West exceeded the value of the goods shipped East. This was balanced by the sales of western foodstuffs in the South, which sent very little into the West. Southern cotton and tobacco were exported to Europe and also sold in the Northeast. But the latter sales were insufficient to pay for the manufactured articles that were bought by the southerners from the eastern industrialists. However, the southern exports to Europe created credits there which were used by the northern importers to buy European products, thus balancing the rectangular trade between East, West, South, and Europe.

Marketing Methods. As trade expanded over larger areas, the gap that separated the producer from the consumer was widened, and an extensive system of distribution became necessary to bridge the chasm. The early agencies for distributing goods in England

through markets, fairs, and itinerant peddlers had practically disappeared, and the more recent merchant-capitalists and pack-carriers were unable to meet the new demands. Consequently, new mercantile agencies developed to supplement the older inadequate methods of distributing commodities, and the basis was laid for the modern system of marketing.

Retail stores appeared in both England and America. Country "general" stores, carrying a wide assortment of goods, were established in small localities and performed a most important merchandising function for sparsely settled rural regions. In the towns and cities specialty retail stores appeared, many of them developing from the earlier small shops of handicraftsmen. These shops usually sold a single line of goods such as shoes, or a closely related group of products such as dry goods or hardware.

An important development was the rise of the wholesale merchant, who purchased many varieties of goods from manufacturers and importers and distributed them to the retail stores in his locality. Some of the largest manufacturers maintained their own branch offices in various sections of the country, but most manufacturers discontinued the marketing of their products and merely sold to the rapidly increasing group of specialized middlemen. Furthermore, practically all industries, instead of producing goods only upon direct orders as previously, now manufactured for the general market in anticipation of a continually increasing demand. As trade expanded and facilities for transportation and communication improved, and

as banking and credit institutions developed, there thus evolved an adequate, though complex and somewhat inefficient, national system for marketing products and financing their exchange.

Style changes were very infrequent, especially in America; consequently, the retailers were accustomed to purchase staple goods in relatively large quantities only once or twice a year. In general the merchandising methods were exceedingly inefficient and poor service was rendered to customers, for competition was not very severe and there was little need to stimulate demand. Credit was usually extended for long terms, especially to farmers; therefore, mercantile credit ordinarily was obtained for equally long periods by retailers from manufacturers and wholesalers. The policy of charging one price to all purchasers seldom prevailed, so that much higgling occurred in arriving at a price. Under such conditions of *caveat emptor* the successful customer was compelled not only to be familiar with the qualities of various products but also to be a shrewd bargainer.

ENGLISH FOREIGN COMMERCE

Though international trade was an important factor in English prosperity during the nationalistic period, it became a vital necessity to the existence of the country after the Industrial Revolution. When foreign trade was retarded during the French Wars, prolonged depression fell upon the country, with declining business and widespread unemployment. After the Napoleonic Wars, however, commerce recovered rapidly and expanded

enormously throughout the nineteenth century. The total value of imports and exports, which amounted to only 100 million dollars in 1750, rose to about 300 million dollars in 1800, and jumped to over 3,000 million by the end of the nineteenth century.

There were several reasons for this rapid development of English foreign trade. Located at the gateway to northern Europe, the country was admirably situated to be used as an entrepôt for distributing products. Enjoying an early industrial development, based on rich natural resources, England turned out products demanded by the entire world. Moreover, a maritime tradition, dating from the days of Queen Elizabeth, had existed, embracing not only a large merchant marine and a strong navy to protect it, but also a well-organized marketing and financial system and ample trading facilities to meet the expanding requirements of overseas trade. Finally, the government's commercial policy, allowing greater freedom of trade, assisted materially the growth of commerce.

During the first half of the nineteenth century English exports consisted almost entirely of manufactured goods. Cotton textiles occupied first place, followed by other textiles and fabricated metal products of iron and steel. Small quantities of minerals, such as coal and copper, comprised most of the remainder. America was the best customer, with the principal European countries also receiving large amounts, while shipments to Asia and Africa became of increasing importance.

Imports into England were composed almost altogether of raw materials for the factories and of food

products for the industrial and urban population. Cotton came largely from southern United States, wool from Australia, and lumber from America and the Scandinavian countries. America also furnished most of the wheat and flour, while sugar, coffee, tea, spices, and fruits were imported from Asia, Africa and the Indies. Exports usually were larger than imports, as English capitalists were making huge foreign investments in developing countries. But in the latter part of the century imports were in excess of exports (as they are at present), for interest payments on foreign investments were being made to English capitalists, and also the English merchant marine was earning large amounts by carrying cargoes for foreign countries, and English insurance companies and other financial institutions were serving the entire mercantile world.

AMERICAN FOREIGN COMMERCE

During the early nineteenth century the foreign commerce of the United States did not expand as rapidly as domestic trade, and it thus became relatively less significant. To be sure, the outbreak of the Napoleonic Wars in 1793 had brought such a great demand for American goods from the European belligerents that between 1790 and 1807 the total of American foreign trade (including both imports and exports) increased fivefold. But this commercial prosperity was terminated by a series of embargoes and obstructions to trade that culminated in the War of 1812, during which the overseas trade was reduced to the lowest point in history. Although there was a partial revival at the con-

clusion of the war, foreign commerce never again attained its former relative prominence.

Instead, American interests were directed more intensively to internal improvements and the development of the West. In addition, the higher protective tariffs that were being enacted restricted the international flow of goods. During the decade of the 1820's there was much popular support of the "American System" program, eloquently advocated by Henry Clay and others. According to the "American System", tariffs on manufactures should be high in order to develop industrial centers as domestic markets for agricultural products. Another feature of the program was the improvement of means of transportation so as to facilitate domestic trade.

Despite these handicaps, an expansion in foreign trade occurred during the second quarter of the century. This growth resulted from an increase in the demand of other countries for cheap American agricultural products and from the more urgent need of Americans for many foreign manufactured articles. The establishment of new trade routes to South America and Asia also opened up new avenues of commerce. Contributing factors were the occasional reduction of protective tariffs and the execution of reciprocal trade treaties which stimulated freer commercial intercourse.

During this period, over half of the American import trade consisted of manufactured goods, principally European textile and metal products. Most of the remainder consisted of tropical and semi-tropical food-stuffs, such as sugar, wines, coffee, tea, and spices from

South America and the Orient. The export trade was practically confined to raw materials and staple food-stuffs, with cotton alone accounting for over half of the total value. England was not only the best customer but also the principal source of imports. During nearly all of the years before the Civil War merchandise imports exceeded exports, and the equation of international exchange was balanced by the export of various so-called "invisible items." These were mainly the profits from the export of freight services by the American merchant marine, the export of stocks and bonds to Europeans who were investing heavily in this country, and the export of silver and gold bullion to Europe, especially after the California discoveries of 1849.

SUMMARY

During the hundred years following 1750 rapid advances were made, in both England and America, in the methods of transporting and marketing goods. Even before 1750 some beginnings had been made in constructing highways, but during the following century important improvements in methods of construction made possible a great extension of the highway network.

At the same time, water transportation on canals, rivers, and oceans developed rapidly. In the United States the completion of the Erie and other canals, and the introduction of steam navigation, especially on the Mississippi and its tributaries, opened up the West and helped to unify the country. In oceanic shipping Amer-

ican shipbuilders and seamen, during the earlier part of this period, enjoyed a considerable advantage over other nations in the building and sailing of ships. However, the era of the clipper ships marked the brief supremacy of the American merchant marine, for when steam and steel displaced wooden sailing vessels, Americans lost their advantage to their European rivals.

The rapid development of steam railroads in the second quarter of the century inaugurated a new era in transportation, marked by the increasing speed, regularity, and cheapness of transportation service. The new agencies enlarged markets and hastened specialization in production; in America they accelerated the expansion of the country and the welding into one nation of the geographically separated sections of the continent.

Domestic trade increased rapidly during this period with the tremendous expansion of large-scale, specialized production. Marketing methods were improved to meet the new requirements, and a system of middlemen, composed primarily of wholesalers and retailers, developed to aid the distribution of goods.

The foreign trade of England throughout the nineteenth century assumed a position of extreme importance as her people came to depend increasingly upon foreign sources for food supplies and raw materials and upon foreign markets for the sale of their manufactured products. American foreign trade, on the other hand, although far from negligible, did not increase as rapidly in value or in importance as domestic

trade. For most of the period, total American exports of raw materials and farm commodities did not equal in value the imports of foreign goods, composed principally of manufactured products. The difference was settled by the sale to foreigners of American stocks and bonds and of American shipping services.

Trade and transportation, like industry, developed with little governmental restraint. It was generally assumed that competition would suffice to protect the public from exorbitant charges and inadequate service.

CHAPTER XIII

Finance

THE industrial and commercial expansion during this period of economic revolution probably would have been impossible without the development that occurred in the banking and financial structure. The investment of long-term capital in plants and machines is essential to large-scale industry; and short-term credit is required for working capital in industry and to finance the distribution of products in domestic and foreign trade. The rise of the middleman and the great expansion of retail trade made more imperative than formerly the development of a convenient and simple medium of exchange, divisible into the small fractional values necessary for the conduct of retail trade. During the hundred years following 1750 the embryonic banking organization developed markedly, and the monetary system was greatly improved and expanded. Important among the developments in this period were the establishment of a national monopoly of banknote issues, changes in monetary standards, perfection of

a fractional coinage system, and the beginning of other experimentation with government control.

THE BANKING SYSTEM

GROWTH OF COMPETITIVE BANKING

The banking system that developed during this period both in England and in the United States was believed, at the time, to be subject to inherent self-regulation that prevented inflationary bank-credit expansion. This self-regulation, it was thought, came about by virtue principally of two things: first, the adherence to a fixed metallic standard and the accompanying use of specie as reserves by the banks; and secondly, free competition among the banks. It was supposed that the profit-seeking free competition among the banks would cause them to supply credit expansion sufficient to meet the "needs of business"; and, at the same time, overexpansion by any bank would be checked because it would lead to withdrawal of specie reserves from that bank. This would compel it to curtail its expansion of credit.

Growth of Competitive Banking in England. With the exception of the monopoly privileges in London of the Bank of England, free competition guided the developments of commercial banking in England until the reforms of the second quarter of the nineteenth century. By 1800 the dozen banks of 1750 had increased to several hundred, scattered throughout the country. With the exception of the Bank of England, they were

small, weak, and frequently inefficiently operated, so that they were ill-prepared to withstand the financial strain of the French Wars.

Much disorder existed in banking during that war, and at its conclusion an epidemic of bank failures stirred Parliament to enact a series of bank reforms between 1825 and 1850, as a result of which the Bank of England was allowed to establish branches in important cities throughout the country. Other joint-stock banks were permitted to operate in London and all parts of the country. As they were not allowed to issue notes they made loans by crediting the amount of the loan to the borrowing customer's demand deposit account, and this was accompanied by a rapid increase in the use of checks as a substitute for banknotes. Many of these banks were later consolidated into a few large systems of branch banking, with most of the banking business of the country concentrated in the hands of five institutions.

Growth of Competitive Banking in the United States. Only three banks existed in the United States when the Constitution was adopted: the Bank of North America in Philadelphia, the Bank of Massachusetts, and the Bank of New York. All issued banknotes, loaned funds, and received deposits.

In the United States, with the exception of the periods 1791-1811 and 1816-1836,¹ the development of commercial banking was guided by free competition, except that the privilege of entering the business of banking had to be granted in a charter by the legislatures of

¹ See below, pp. 255-257.

the various states. From 1811 to 1816 the number of state-chartered banks increased threefold to about 250. Another period, from 1836 to 1860, witnessed rapid increase in the number of banks to about 1600 by 1860, as a result both of lax banking supervision and of the rapid growth of population and trade needs. As regulation of banking lay in the hands of the separate states, the soundness of banks varied widely; consequently, in many sections of the country, banking practices were largely uncontrolled, resulting in numerous evils. Banknotes were commonly issued in excessive quantities, credit was carelessly extended, and a lamentably large numbers of failures occurred.

Conditions under local banking were even worse in the United States than they had been in the previous century in England. In this country there was a more extreme speculative spirit of individualistic exploitation associated with the general expansion westward. In addition, the banks were small, usually isolated from each other, and subject to very inadequate supervision.

Though sound methods of banking were evolving in some sections, there was in general a deplorable ignorance of banking principles. Many of the country banks permitted their customers to increase their deposits subject to check by borrowing from the bank on long-term promissory notes based on agricultural security. Confused ideas also existed as to the distinctions between money, wealth and capital, for it was believed by many that an increase in money was equivalent to an increase in wealth and capital. And very important was

the desire of southern and western debtor classes for easy money, which could be most readily obtained through the overissue of banknotes accompanying the easy extension of credit by the bank for highly speculative undertakings. Such excessive credit expansion occurred especially during boom periods; indeed it stimulated the boom condition. But when the resulting reaction and depression appeared, the banks were unable to withstand the financial strain; because at such times there developed a large demand for cash, while the banks had too great a proportion of their funds placed in long-term investments.

BANKNOTE CURRENCY

During this period banknotes attained an importance not reached before or since. At the middle of the eighteenth century notes were beginning to be used widely, supplanting metallic money to some extent, but primarily furnishing additional means of payment for the expanding trade of that period, which was described in Chapter XII. Banknotes constituted a more convenient and more generally acceptable means of payment than the mercantile credit that preceded them. By the middle of the following century, however, bank checks drawn against demand deposits, which were seldom used in 1750, were rapidly displacing banknotes in business transactions.

Probably the most interesting aspect of banknote money is the nature of the security that guarantees the redemption of the note. In England and America the more usual types of security were specie, government

bonds, general assets of the bank, and commercial paper (that is, mercantile and industrial promissory notes held by the banks). Frequently, however, notes were irredeemable and had nothing at all as security.

Competitive Issue of Banknotes in England. In 1795 most of the several hundred country banks, along with the Bank of England, possessed the power of note-issue. Although the notes of all banks were redeemable on demand in gold coin, there was no further specific security beyond the general assets of the issuing bank — these assets consisting of the promissory notes or other security against which the bank extended credit and issued the notes. Usually the gold held as a reserve constituted only a small percentage of the outstanding notes. Consequently, though the issuance of banknotes was a great convenience to trade, it was also a possible source of danger in the event of a widespread and concerted demand for the redemption of the notes in gold, such as occurred in periods of financial stringency.

The long continuation of the French Wars created such a crisis, and the strain on the banks caused many failures. Finally, conditions became so serious and the specie reserves of the Bank of England, the central bulwark of the country's banking system, were so reduced that in 1797 the government passed the Bank Restriction Act. This allowed the Bank to issue banknotes without the necessity of redeeming them in coin on demand, and greatly relieved the financial strain. The country became accustomed to a wider use of irredeemable paper currency during this episode, for it was not

until 1821 that the Bank resumed cash payments in gold.

Competitive Issue of Banknotes in the United States. Until the Civil War nearly all banks in the United States issued notes without other specific security than the general assets of the issuing bank.² This method of issuing notes is known as the "banking principle." Under this plan a bank can issue notes against its assets according to the economic requirements of the bank's customers. The customers' promises-to-pay become the security for the notes issued by the banks, for the bank's assets consist of the promissory notes or other instruments of credit representing loans to enterprise for productive and commercial activities. The virtue of such general-asset note-issues is that they are responsive to demand; but, unless there is some restriction placed upon the bank, there exists the temptation to overissue.

Though the local, state-chartered banks were supposed to stand ready at all times to redeem their notes in specie, few of them maintained adequate specie reserve funds and some of them no specie at all; and, during the two periods of competitive banking, failure to redeem notes in coin was frequent. As the method of checking against demand deposits had not developed

² Two notable exceptions to this statement should be pointed out: In 1828 New York State originated the method of having the state banks contribute to a safety fund, supervised by state authorities, as a guaranty fund for the notes and deposits of failed banks; and in 1838 New York also developed the method of having government bonds deposited with a state authority by the note-issuing bank as backing for its notes. It is interesting to note that the latter of these ideas was incorporated in the laws of sixteen other states prior to the Civil War, and later in the National Banking Act.

to any extent in this country, the issuance of banknotes was the principal way in which bank loans were extended to borrowers. Consequently, during the periods of local banking, when redemption in specie was seldom enforced, banknotes were issued in excessive quantities by making extravagant loans.³

As such banks issued their notes to excess, depreciation resulted and the notes circulated at a discount. The newspapers of the day carried long lists of the current value of various banknotes commonly circulating in the community, for the respective notes fluctuated in value and caused endless confusion to individual traders and consumers. In 1860 one estimate distinguished 5,400 different kinds of notes in circulation, many of which were counterfeit.

National Monopoly of Banknotes Issue. In England, despite the resumption of gold payments in 1821, banking conditions continued unsatisfactory and several financial panics occurred within a few years. As a result, the Bank Act of 1844 altered completely the methods of issuing banknotes in England. The Bank of England was given a monopoly of future note-issue (above the amount already outstanding) in all England as well as in London. It was allowed to keep in circulation permanently 14 million pounds of notes secured by government bonds, but for every additional note issued the Bank was compelled to hold as security an equivalent amount of gold. This method of issuing banknotes only when covered by specie, known as

³ One Michigan bank failed with \$580,000 of notes in circulation and with only \$86.46 in specie with which to redeem them.

the "currency principle", caused the amount of notes outstanding to be inelastic, as their quantity did not expand and contract with the volume of business. However, the increasing use of bank checks furnished a method of quickly increasing the quantity of circulating media in response to business demands.

In the United States, the passage of the National Banking Act in 1863 constituted an important step toward the organization of a stronger banking system. The new law raised the banking standards remarkably, by imposing restrictions upon the establishment of banks, by requiring specified reserves behind deposits, by subjecting the banks to rigid, periodic examinations, and by providing for a safe and uniform currency. Two years later an act was passed that had the effect of giving to the national banks a monopoly of banknote issue in this country. A federal tax of ten per cent on the banknote issues of state-chartered banks effectively prevented their issue; and there was a rush to secure federal charters. As a result the number of state-chartered banks in operation fell at one time to about 250.

This elimination of state banknotes resulted in a uniform and sound national currency, which proved to be the outstanding benefit of the new banking system. National banks were allowed to issue banknotes by purchasing, and depositing with the Treasurer of the United States, government bonds as security for the notes. Thereafter the only banknotes in the country were bond-secured, and they expanded and contracted not with business needs but inversely with the price of

government bonds. It was not until later that banknotes secured principally by commercial paper were issued in this country, although the banknote issues of some state banks, before the act of 1865, were backed by the general assets of the banks, including of course, the commercial paper they held.

From this brief description of the evolution of bank-issued paper money, it is seen that the variety of bank-issues that existed at the beginning of the period in England and the United States was displaced by a uniform national paper currency. The issuance of these banknotes was either restricted to a single institution or a single method, in each case under the close supervision of the government. Although both the colonies and the Continental Congress issued government paper money, it did not appear again in either England or this country until the Civil War.⁴ The federal Constitution specifically prohibited the issue of paper money by states.

BEGINNING OF CENTRAL BANKING

In England. As already pointed out, the numerous competing country banks in England were merged into a small number of branch banking systems, and the whole banking system was, by the middle of the nineteenth century, co-ordinated under the domination of the powerful Bank of England.

The Bank of England acquired greater responsibility and prestige as it was given additional powers. It be-

⁴For a brief time there was a small issue of notes payable to bearer made by the United States government during the War of 1812.

came the central bank of the country, and by holding most of the reserves of all other banks was the keystone of the entire credit structure. It was also the fiscal agent of the government, handling its accounts and managing the national debt. Not only did it eventually become the sole bank of note-issue but it was also responsible for all the other currency of the country. It was therefore a semi-governmental institution, although privately owned and operated. During the nineteenth century it became the most powerful banking organization in the world.

In America. During this period there was some tendency towards the development of a banking system also in the United States; but it was merely a beginning, and it was experimental. It cannot be said that a co-ordinated and unified banking system existed in the United States even after the founding of the national banks. Under the National Banking Act, banking was not organized into a single centralized system, because each state still could charter banks; and while state-chartered banks could no longer profitably issue banknotes, they could still do a deposit business. In the United States, a banking system existed in the nineteenth century only in the sense that the banks were associated loosely for the purpose of clearing checks and redeeming notes. These inter-bank relationships became more important in the latter half of the century.

However, there occurred during the early years of our national history significant experiments with a central bank as a means of co-ordinating the banking

system. In one of his famous financial reports to Congress, Alexander Hamilton recommended the establishment of a central bank under a federal charter. The proposal was accepted, and in 1791 the First United States Bank was chartered for a twenty-year period.

The Bank, with eight branches located in various states, proved very successful. It was of considerable assistance in extending loans to the federal government, and in acting as its agent in collecting, transferring and disbursing its funds. Engaging in general banking practice, it facilitated greatly the industrial and commercial activities of the nation through granting loans and issuing banknotes. In addition, it became a regulator of all paper currency in the country by refusing to accept the notes of local banks that did not redeem their currency in specie on demand. This sound monetary procedure created opposition to the central bank by the eighty-eight state-chartered local banks, which were required by the action of the United States Bank to redeem their 45 million dollars of notes at par whenever presented. This effectively prevented the local banks from overlending and overissuing their notes, although it did not prevent them from issuing the amount of banknotes necessary for the legitimate business of their communities. So powerful was the opposition of the local state-chartered banks to this discipline of the United States Bank, and so great the fear that the Bank might dominate the government itself, that when the Bank's charter expired in 1811 it was not renewed.

Upon the demise of the First United States Bank

a period of disordered local banking occurred. During this unsettled period the number of state-chartered banks increased threefold to about 250; there was a marked expansion of state banknote issues; prices rose precipitously; and holders of these notes lost heavily, not only because of the rising prices but because of defaults on many of the banks' issues. Relief from the chaotic situation was obtained in 1816 by the establishment of the Second United States Bank, with a twenty-year charter and under regulations similar to those of the First Bank. Despite some mismanagement during its early years, the Second Bank also was highly successful. Operating through twenty-five branches, it distributed credit facilities to different sections of the country, again regulated the currency by presenting local banknotes for redemption in specie, and caused note circulation to be reduced by half. Once more opposition developed, and to fight the renewal of the Bank's charter the power of the local banks was combined with the antagonism of western debtor classes, who feared a monopoly of capital by the conservative eastern creditors and banks. A popular champion for their cause was found in Andrew Jackson, whose election as President assured the end of the bank.

The dissolution of the Second United States Bank in 1836 inaugurated a period of local banking usually designated as the era of "wildcat" banking, which continued until the Civil War.

In both England and the United States, some degree of governmental regulation had thus developed by the middle of the nineteenth century, and the beginnings of

a central banking system had emerged. The four principal functions of such a central banking system are to provide liquid reserves of cash, to maintain an adequate and sound note-issue, to act as the fiscal agent of the government, and to exercise some control over credit conditions. By the end of this period the Bank of England performed the first three of these functions and was beginning to exert a more positive influence over the general credit structure. The extension of this function, however, came during the next seventy-five years. In this country the First and Second United States Banks had regulated the currency and acted as fiscal agent of the government, and if they had been allowed to continue, a strong central banking system probably would have developed.

THE MONETARY STANDARD

For hundreds of years both gold and silver had served as the standard of money in which values of other goods and services were expressed. For the payment of obligations, both metals were usually made legal tender at a specified ratio. This legal ratio was changed from time to time as the market values of gold and silver fluctuated, although previously for a long period of time they remained stable compared to the wide fluctuations in the market ratio after the middle of the nineteenth century. Although silver had formerly been the dominant metal, gold was increasing in popularity and was coming to be accepted

as the single monetary standard. In addition to the bimetallic, silver, and gold standards, an inconvertible paper standard was sometimes used.

With the development of commercial banking and the accompanying expansion of bank credit, either in the form of banknotes (as in the United States) or in the form of deposits (as in England) during this period, the question of the monetary standard came to have a new importance. This was because standard money was used as bank reserves upon the basis of which individual banks expanded their deposits or note issues. This resulted in the development of a significant relationship between the monetary standard and bank credit.

BIMETALLISM

In the latter part of the seventeenth century England adopted free and unlimited coinage of both gold and silver coins for everyone who presented bullion for the purpose. Under this bimetallic standard the government fixed a ratio of fifteen and one-half ounces of silver to one ounce of gold as the statutory legal tender value of the two metals when either was used in paying monetary obligations. However, fluctuations in the market values of gold and silver created continuous monetary difficulties.

The Bank Restriction Act of 1797 suspended the redemption of banknotes in specie, and England was thus placed upon a standard of inconvertible paper money. For several years there was a careful restriction of the issue of notes so that they maintained approxi-

mately their former gold value, but after about ten years both the Bank of England and the country banks began issuing excessive quantities. An inflation of prices followed, the value of the notes fell in terms of gold, and, as the market price of gold bullion rose, gold coins were rapidly driven from circulation by the paper notes.

One of the first problems confronting the new republic of the United States after the adoption of the Constitution was the establishment of a sound national money. The coinage act of 1792, based upon Alexander Hamilton's "Report on the Mint", provided for a mint in Philadelphia and established the bimetallic standard of money. Both silver and gold were made full legal tender at a ratio of fifteen to one; that is, a silver dollar weighed fifteen times as much as the gold dollar of 24.75 grains, and either could be tendered in payment of an obligation expressed in money.

As the world market value of gold was about fifteen and one-half times that of silver, no gold was brought to the mint to be coined, for it was more valuable as bullion than as money. Furthermore, because American silver dollars were being drained to the West Indies, the mint was closed to the coinage of silver dollars, and for thirty years none were produced. As neither gold nor silver dollars were being minted, the country depended for metallic currency upon various foreign coins that Congress made legal tender by weight for the payment of debts.

In 1834 the legal monetary ratio between silver and gold was changed to sixteen to one. Thus the gold

value of silver in the United States was placed below the gold value in France, where a legal ratio of fifteen and a half to one was maintained at that time. The silver disappeared from American circulation, and this country, though legally on a bimetallic standard, was actually on the gold standard. This situation continued until 1861, when the financial strain resulting from the Civil War made impossible the redemption of paper money in specie. Accordingly the country was placed upon an inconvertible paper standard until 1879 when redemption in gold was resumed.

THE GOLD STANDARD

A commission was appointed by the English government to investigate the causes of the rising prices that occurred after the Bank Restriction Act of 1797, and to study the entire monetary problem. In 1810 "The Report of the Bullion Committee", which has become famous as a document on monetary theory, was presented by this commission. It pointed out the relation between the quantity of money and prices and recommended the restriction of issues of paper money and the immediate adoption of the gold standard. The advice was not followed until 1816, when the Gold Standard Act was passed. This act abolished bimetalism and established a monometallic gold standard. The Bank of England did not resume specie payments on its notes in gold, however, until 1821. From that time until the beginning of the World War in 1914, England remained on the single gold standard, with the exception of three short suspensions.

It is seen, therefore, that both England and the United States, after experience with both bimetallic and inconvertible paper standards, finally adopted the gold standard.⁵

FRACTIONAL COINAGE

Despite the earlier improvements that had occurred in minting coins, a satisfactory system of subsidiary coinage did not exist at the middle of the eighteenth century. Coins were relatively scarce, were of a great variety of kinds and values, and were occasionally drained from circulation if their metal content became more valuable as bullion than as money. By the end of this period, however, through the adoption of three principles, a sound system of fractional currency had been established in both England and the United States.

In 1816 when the Gold Standard Act was passed in England, silver coins became merely subsidiary token money, with their silver content and market bullion value far below their legal monetary value. This prevented them from being melted down, since their value as money continued to be more than their value as bullion because of the wide margin, provided in the 1816 act, between the money value and bullion value of the coins. Moreover, silver shillings were made legal tender in payment of debts up to forty shillings, and copper coins were legal tender to one shilling. This quality made them freely acceptable in trade, and by mak-

⁵ Although it was not until 1900 that the so-called "Gold Standard Act" placed the United States on the gold standard by statute.

ing them freely convertible into these standard coins their quantity was limited to the amount needed for trade.

In the United States fractional silver coins were of full weight, a half dollar, quarter, and dime containing one half, one quarter, and one tenth of the silver content of a silver dollar. When the act of 1834 gave silver a monetary value two per cent below its bullion value, these fractional coins began to be exported in payment for imports of goods, and the fractional coinage needs of the country continued to be met by a miscellaneous assortment of foreign coins. This situation was remedied by the Coinage Act of 1853, based on the English act of 1816, which debased the silver content of fractional coins. They were thus worth more as money than as bullion, and remained in circulation to meet monetary needs in spite of any but a very great relative increase in the value of silver. They were also made legal tender up to certain amounts.

Consequently, by debasing fractional coins, giving them legal tender qualities, and making them freely convertible into other standard coins of full value, a sound subsidiary coinage system was established in England and the United States by the end of this period. The problem of the proper relationship between fractional or subsidiary money and the standard money was thus solved.

SUMMARY

At the beginning of this period three essential elements of modern commercial banking had already

evolved. Banks provided secure places for the deposit of funds, both for demand deposits subject to check and for saving deposits. Banks also facilitated credit transactions by making short-term commercial loans to manufacturers, merchants and others, thus aiding the production and exchange of goods. And, third, they further increased the currency by issuing paper bank-notes to meet the needs of the expanding population in making purchases and sales. However, banks were small, few performed all of the above functions, and owing to the lack of experience, the general principles of sound banking were scarcely understood.

At the end of this period, after undergoing rigorous and often unfortunate experiences through trial and error, the modern commercial bank evolved. Each of the chief functions was further developed, other services were inaugurated, and a relatively sound body of banking principles was formulated. Moreover, some tendencies towards the development of a co-ordinated banking system forecast the greater efforts to be made in that direction during the modern era.

The body of principles relating to banking was consistent with the prevailing theory of free competition for economic activity in general. Under the so-called "banking principle", which was first fully expounded in the later writings of John Law,⁶ the distribution of bank credit among private enterprisers would be ruled by competition among the banks to satisfy the "needs of business"; these "needs of business", in turn, would be judged according to the criterion of free competi-

⁶ See above, p. 149.

tion among profit-seeking economic enterprises. The enterprises that, under free competition, were most suited to thrive would win out in their competition for funds from the banks because they would be able to demonstrate to the banks that their ventures were most likely to bring profits. Thus competition among the banks and competition among business enterprise would both tend to bring about the most desirable distribution of credit among the various competing economic activities. But a second, and very important, requirement came to be recognized during this period, namely that the total quantity of bank credit that should be permitted needed to be limited in some manner. This limitation on the total expansion of credit was believed to be accomplished by adherence to a monetary standard and the use by the commercial banks of standard money as reserves. Thus the total amount of credit expansion which could take place, so long as the standard was adhered to, would have a fixed maximum in proportion to the amount of standard money in existence.

At the middle of the eighteenth century the monetary conditions both in England and America were wretched. The principal media of exchange consisted of gold and silver coins, copper tokens, paper banknotes, and, in the colonies, government paper money called bills of credit. Monetary standards were not clearly defined and there was little uniformity in the currency, for various coins of different weight and fineness were circulating side by side, particularly in the colonies, where most coins were foreign. Three im-

portant monetary improvements were effected during the subsequent hundred years: a uniform paper money was provided, the monetary standard changed from bi-metallism to gold, and a sound system of subsidiary fractional coins developed.

C H A P T E R X I V

Economic Individualism

FOR centuries the economic activities of Englishmen had been rather strictly regulated. During the Middle Ages the Church had exercised close control over much of economic life, with the manor lords in the country and the guilds in the towns exerting additional local authority. Upon the disruption of the medieval system the national government assumed the role of economic regulator and, under the influence of the mercantilistic theories of the time, subjected industry, agriculture and trade to central supervision. The main purpose of this regulation was to achieve a self-sufficient national economy, but an additional result, and one that had been the principal purpose of the earlier medieval control, was the protection of one group from another, buyer from seller, employee from employer, and vice versa.

DECLINE OF MERCANTILISM

Regulation was relatively easy to administer under the local, personal conditions of medieval England; but

it proved more difficult under the national economy, particularly when economic conditions and ideas underwent fundamental changes that extended beyond the scope of the existing methods of control. As the eighteenth century advanced, enforcement became increasingly difficult; by the end of the century many laws were ignored, and finally in the first half of the nineteenth century most of the regulations were removed.

Changing Economic Conditions. There are a number of reasons for the decline of the mercantilistic policy. Changed economic conditions alone probably would have been sufficient to make a system that was successful under one regime ineffective and obsolete under a different set of circumstances. This was particularly true of the mercantilistic system, which was too inflexible and too circumscribed to be adjusted to changing conditions in an expanding economy.

Revolutionary changes were occurring in agriculture, industry, transportation and trade. In agriculture there appeared a new type of large-scale capitalistic farming, which required the application of capital, the exercise of enterprise, and especially the introduction of methods that were more difficult to supervise. The more striking transformation of industry from the simple domestic system into the mechanized factory system created problems and situations too complex and too extensive to be regulated by the prevailing legal mechanism, or governmental organization. The increasing power of the merchant-capitalist, with his ever-growing international interest in selling in distant markets, had extended economic activity beyond national boundaries.

and national control. This international development was accentuated by the growth of the factory system, which required a broad market for its products. Furthermore, with respect to domestic affairs, the new laboring conditions in the factories made anachronistic such laws as the Statute of Apprentices. An entirely new system of transportation was developing, and the rapidly expanding agencies of mechanical transport far outstripped the few experimental methods of government control.

Probably the most important of all disruptive changes were those in trade, in marketing methods and in finance. With the continued development of open money markets, international capital became available, and capitalists invested their funds where profit possibilities were greatest. The fallacy that an accumulation of specie was necessary to meet extraordinary expenditures was exposed by the new methods of extending credit when needed. Experience demonstrated that capital and trade tended to flow toward cities and countries where regulation was least. Market areas were widened and producers and consumers were further separated by specialized middlemen as new methods of marketing evolved. The growth of international trade and the more intricate organization of the economic system made government regulation more difficult and less effective. Because of the virtual impossibility of enforcing the laws in their existing form, many of them fell into disuse. The changes in industry, agriculture, and transportation, the development of an international trade economy, the increasing

complexities of economic activity, and the expansion of world-wide capital markets undermined mercantilism.

Opposition of New Classes. A second major cause of the decay of mercantilism, and one that resulted from the above factors, was the active opposition of the new capitalistic classes. The new industrialists and merchants, desiring as much freedom as possible in production and trade, chafed under such restrictions as the navigation acts and the closed monopolies of the large trading companies. The increased efficiency and cheapness of large-scale factory production, which enabled manufacturers to sell their products in competition with the rest of the world, made unnecessary the protection bestowed in the seventeenth century. In fact, they objected strenuously to the trade barriers that prevented foreigners from buying their products and from sending to England raw materials for their machines and cheaper foodstuffs for their laboring classes. The merchants wished to be free to buy and sell, without trade limitations, duties, or prohibitions, whenever and wherever it was profitable. Especially did the new class of merchants who were outside the old monopolistic trading companies demand that all trade be thrown open. It was contended that the country as a whole would benefit if English goods were sold throughout the world and if other nations were allowed to send their products to England in payment.

However, many classes upheld the old regime and opposed any movement to undermine the regulatory policies that aided them. The agricultural classes fought

for the retention of protective tariffs on farm products. The introduction of machinery was opposed by the skilled craftsmen, who urged the continuance of the Statute of Apprentices. Other groups who were injured by the new conditions sought government aid in protecting themselves and in delaying the changes. But they were mainly unsuccessful, for the advance of the new capitalistic system of production proved too powerful to be checked.

Demand for Natural Development. There was, moreover, a growing belief in the country that regulation was harmful and unnatural. Increasingly men thought that the extreme government control had led to many evils and much injustice in the economic system, and that conditions would be greatly improved if the restrictions were removed and the country allowed to develop in accordance with "natural" laws. It was believed that restrictions which forced economic activities into artificial lines prevented the full employment of the economic powers of individuals and the proper utilization of the country's resources. The government was fostering parasitic monopolies through charters, tariffs, and bounties; a multitude of laws restrained persons from engaging in activities and following practices that would be profitable to themselves and beneficial to the country. This was considered oppressive and unsound. The opinion was spreading that artificial control and government connivance with special interests should be discontinued and that free competition should be allowed to direct the course of economic affairs.

Desire for Liberty. This attitude was greatly strengthened by the rapid spread during this period of the desire for greater personal liberty. The growing demand for liberty was not peculiar to Englishmen or limited to the sphere of economics. In politics it culminated in the democracies of America and France, and led to wider suffrage in England; and in religion greater freedom of worship was being demanded in many countries. The general attitude was apparent also in literature, the arts and sciences. The desire for more liberty in the field of economics expressed itself in a demand for a greater freedom of choice in entering a business or occupation, in seeking employment, in hiring employees, in determining wages, in buying and selling products, in establishing prices, in carrying on without government intervention the thousand and one activities of the economic system. Men looked upon regulations as an interference with their natural liberty. That such an interference was detrimental to their economic interest seemed apparent to them in the light of the changes that were taking place.

Economic Theory. Finally, a system of economic doctrines was developing that proclaimed the falsity and futility of government control over economic society. These ideas were first collected in one book and expounded as a body of economic laws by Adam Smith. His famous work, "The Wealth of Nations", published in 1776, laid the foundation for the science of political economy. Smith, Malthus, Ricardo, and later economists of the period declared that the greatest economic good resulted from allowing every person to follow his

own interests in his own way without restriction, assistance or interference of any sort. In fact they asserted that natural laws of supply and demand existed which prevented any program of government regulation from operating successfully. It was believed that prices, wages, rents, interest, profits, poverty, production, consumption, were all determined by immutable economic forces. Thus to the opposition against mercantilism, composed chiefly of the new capitalistic classes and the lovers of liberty, was added the intellectual support of the new science.

NATURE OF ECONOMIC INDIVIDUALISM

The stage of economic history that followed the decay of the mercantilistic system of government regulation is usually known as the period of *laissez faire*. This term is applied to the theory that the government should perform as few functions as possible, and especially should pursue a policy of "hands off" in economic matters. But it is important to realize that the economic theory which developed during this period was far more comprehensive than a merely negative policy of government non-interference. It also included a definite program of principles that explained the operation of the economic system. The nineteenth century should be known more properly as the period of economic individualism or of free private enterprise. The system of free private enterprise embodies three fundamental elements: the *laissez-faire* policy of government, competition, and private property.

Laissez faire: As has already been indicated, the dis-

ciples of economic individualism not only denied that government intervention in economic life was beneficial, but in general they considered it useless and in many cases even harmful. In fact, they would have restricted the functions of government to the very minimum. Adam Smith believed that the government should only (1) protect the country from foreign military attack, (2) administer justice to its citizens, and (3) perform certain social tasks for the general welfare that could not be profitably undertaken by individuals.

Under free private enterprise, therefore, each person would be liberated from government regulation. Adam Smith urged that the enterpriser should also be free from any restrictions imposed by custom or status, such as existed in the Middle Ages, or from control by any voluntary organization or monopolistic combination, as had frequently occurred during the preceding centuries. For this reason he condemned government interference in the form of tariffs, bounties and subsidies, and also stressed the importance of eliminating monopolies, which at that time were chiefly sponsored by the government.

Competition. The force that was to cause the new economic system to operate was competition for profits. All prices, whether of goods, labor services, capital, or otherwise, were to be determined by conditions of demand and supply; and these prices would regulate the production, distribution and consumption of goods and services. Prices therefore became the regulator of economic activities, rather than the government, as in

the period of nationalism, or rather than custom, as in medieval times.

According to the economists of this period the incentive of self-interest would stimulate an individual to put forth his best efforts in competition with others. In fact, the individual was considered to be clothed with the attributes of an "economic man", who knew his own best interest and followed it in his everyday purchases and sales and other economic dealings. If a person attempted to take advantage of another, by selling an inferior product, by exploiting labor, by charging a monopolistic price, or by any other method, he would lose his customers, or be unable to secure employees, or invite new competitors into the field, or lose his business reputation. So it was thought that competition would furnish its own restraints in regulating business transactions and in preventing unfair practices.

It was believed that if every person followed his own self-interest the greatest good would accrue to the greatest number. To get the greatest return, it would be to the individual's interest to produce the best product or yield the best labor service, and consequently society would also be benefited thereby. This belief that the interest of the individual coincides with the interest of society has been called the "law of economic harmonies." This, it was believed, was a natural law; therefore any interference with the economic freedom of a person would harm society as well as the individual. The entire theory of free private enterprise was thus considered to be composed of a body of natural

laws, in accordance with which all economic forces operated as though directed by an "invisible hand" that created order in the economic universe. Enlightened self-interest and universal free competition constituted the generative power and the uniting force of the individualistic system of free private enterprise.

Private Property. Another requisite of this economic system, which however is not peculiar to it, is private property. If each individual is to be allowed to do as he thinks best with his wealth as well as his labor, he must have private property rights to his wealth. It must be possible for him to invest his capital funds wherever he believes the opportunities for profit are most advantageous. The wealth or capital goods (such as land, buildings, machines, supplies, equipment) in which he has invested his capital funds must be subject to his control, otherwise he cannot display the initiative and acumen of an active capitalist, which is the essence of free private enterprise.

It is thus seen that economic individualism or free private enterprise means an economic system in which goods and services are produced, distributed, and consumed without government interference; in which individual freedom of action exists in the use of labor and capital; and which operates through a system of freely competitive prices in open markets.

TRIUMPH OF LAISSEZ FAIRE

This system of economic theory was more and more widely accepted during the closing years of the eighteenth century by the statesmen and intellectual groups

as well as the middle classes of merchants and manufacturers who had most to gain from its adoption. With the rise of new forms of economic organization that were beyond the control of existing laws and with the disappearance of older forms to which regulation had been applied, many of the restrictions were no longer effective. Therefore, during the first half of the nineteenth century the new theory was generally adopted throughout the country and in Parliament, and most of the old regulations were repealed. The governmental policy of *laissez faire* became triumphant.

Cessation of Labor Restrictions. A number of laws had been enacted during the preceding centuries that regulated the relations between employers and employees. Some of these restrictions were disliked by employers and some by employees, and the disappearance of the laws, therefore, was welcomed by one group or the other. On the one hand, many of these laws were hampering the labor policy of factory owners, and to them *laissez faire* appeared very desirable. For example, efforts were made by the hand-loom weavers to enforce the provision of the Statute of Apprentices that required seven years of apprenticeship; nevertheless, it was gradually weakened and was finally repealed in 1814 as an interference with the natural right of employers to hire whomsoever they pleased. On the other hand, the combination acts, which had been passed to prevent workers from combining to bargain collectively on wages, hours and working conditions, were rescinded in 1824. In the sixteenth century settlement laws had been passed to prevent persons from

migrating from one parish to another without special permission, so that the new parish would not be responsible for the relief of poor persons who came from another district. As these restrictions proved to be a serious obstacle to the necessary movement of people from the south to the new industrial north of England, they were generally removed by 1834.

Repeal of Navigation Acts. The most striking illustration of the victory of *laissez faire* over mercantilism occurred in the movement for freedom of trade. Based on the new individualistic theory that both parties gain from trading, and opposed to the mercantilistic theory that a large store of gold and silver increases the wealth of a country, the free-trade movement made rapid headway. One after another the chartered trading companies lost their monopolistic privileges, and in 1833 even the trade area of the East India Company was thrown open to all merchants. In 1796 the navigation acts of 1660 were relaxed to allow the vessels of the United States to participate in English trade, probably because of the necessity of securing supplies and food during the Napoleonic Wars. This privilege was soon extended to other countries, and later a much more lenient commercial measure was enacted. Finally in 1849 the navigation acts were abolished completely, and the importation of goods was allowed in the ships of any nation. Shortly thereafter the English coastwise trade was also thrown open to foreigners and the requirement that English ships be manned by English crews was removed. The repeal of the navigation acts caused the disappearance of the old colonial system of

commercial restrictions, and all English colonies could then trade in any market and use the ships of any country.

Abolition of Corn Laws. The greatest controversy in the free-trade movement was waged over the corn laws, for opposition was increasing against the high tariffs on food products. The movement, centering in Manchester, was led by the manufacturing groups of northern and western England, and the so-called Manchester School of economic thought became famous because of its free-trade doctrines. The Anti-Corn-Law League was organized there to wage a campaign for the repeal of the measure. Under the leadership of Richard Cobden and John Bright and backed by the financial strength of wealthy industrialists, a powerful program of propaganda was conducted.

The group pointed out that protective tariffs restricted trade and prevented foreigners from buying English manufactured products. Duties on wheat raised the price of bread to all the population and injured especially the industrial laboring classes. In fact, according to the prevailing Ricardian theory of wages,¹ the higher food prices necessitated higher wages, thus raising the costs of manufacturing and impairing the competitive position of English products in foreign markets. Fur-

¹ The theory of wages developed by Ricardo is known as the "iron law of wages." It is so designated because it states that a wage is a price merely necessary to enable laborers to subsist, and it depends upon the price of food and other necessities of life. A rise in the price of necessities would cause a rise in wages. But if wages were to rise above such a minimum of subsistence, then population would tend to increase, and the rate of wages would be forced back to a mere subsistence standard of living by the consequent increase in the labor supply.

thermore, the country was being taxed to pay bounties to farmers, whose land rents were raised accordingly, and the small group of landowners was receiving the benefits of the artificial restrictions.

The landowners retorted by showing that most of the taxes of the country fell on them, and therefore the receipt of large returns on land was necessary. Also home production of crops should be encouraged as much as possible so that the country would not be dependent on foreign sources for food supplies. Moreover, the farmer, because he was the backbone of the country through providing food for the urban population, should be protected as a patriotic duty. As for the markets of the manufacturer, it was declared that the domestic demand for his products would be greatly curtailed if the market for home-grown farm commodities were destroyed by the importation of cheap foreign wheat. Possibly as a result of the economic unsoundness of these arguments, but more probably because of the political strength of the growing class of merchants and industrialists, the corn laws were repealed in 1846, with gradual reductions to occur over a three-year period until the duty had disappeared.

Freedom of Trade. This victory of the free traders foreshadowed the complete demolition of the entire structure of protective tariffs, and England prospered as a result. Already the hundreds of existing tariff acts had been condensed into a more simplified schedule, and some reductions had been made. In 1845 the duties had been removed from nearly five hundred commodities, and during the next few years all the remain-

ing protective tariffs were abolished. By 1850 England was a free-trade country. The remaining duties were for revenue purposes, and even these were compensated by internal levies of the same amount on similar domestic products.

Trade with other countries was further aided by a series of commercial treaties. Several reciprocal trade treaties, under which concessions were granted by each country, had been negotiated about 1825. This policy was carried further by the Cobden-Chevalier treaty with France in 1860, under which practically free trade conditions existed between the two countries, and as a result European trade was more nearly on a free basis during the succeeding two decades than at any other time in history.

Disappearance of Regulations. Internally there were many other instances of the eventual triumph of *laissez faire*. The assizes on various food products disappeared, and the statutes regulating the methods of producing sundry industrial products were abolished. There was almost a complete absence of government supervision over financial affairs. The laws limiting the amount of interest charges were repealed, and thereafter interest rates were determined by competitive forces. The repeal of the Bubble Act, in 1825, increased the freedom of incorporation and facilitated greatly the accumulation of capital funds for investment in public utilities, banks, and similar businesses. Even the imposition of an income tax was opposed as an unwarranted interference with the natural liberty of individuals. And so the government withdrew from practically all fields of

economic activity, or at most it exercised only a minimum of control. As a result, change and progress were facilitated, initiative and enterprise were furthered by the prospect of large rewards, privileged government-fostered monopolies disappeared, production and trade expanded, and wealth increased.

However, most of the wealth was concentrated in the hands of a small number of capitalists, with the possibility of huge returns giving birth to avarice and greed for power. The business men of the period seized upon the new individualistic theory of free private enterprise to justify the appearance of any excesses or evils as a "natural" result of the operation of the system. The theory of unregulated competition thus became the law of the jungle, with every man for himself and the "devil take the hindmost." It produced great extremes of riches and poverty, for the strong took advantage of the weak, who had formerly been protected by the Church and the government; and under the guise of personal liberty, employees were forced to wage an unequal struggle with their employers. The abuses that arose in many places throughout the economic structure soon made it evident that unregulated individualism was not an unmixed blessing and would not produce the prophesied Utopia.

EXCEPTIONS TO LAISSEZ FAIRE

Almost from the very first it was apparent that some social control through government action must be exerted to protect various groups in several economic fields. Although for a short time a *laissez-faire* policy

was applied to railroads, it soon became evident that they were monopolistic in character, and that a certain amount of government control was necessary to protect the passenger and shipper from exorbitant charges. The public nature of banking was also recognized, and reforms were shortly instituted to create greater stability in the financial structure. It was realized that poverty would not be eliminated under the system of free private enterprise and that the devil would not take care of the hindmost, so in 1834 the Poor Law was passed to aid the legitimate and deserving paupers. In the latter part of the century the social insurance movement was inaugurated to protect further the workers of industry against the hazards and insecurity of industrial employment. A different type of exception to *laissez faire* appeared when the English government, believing in the necessity of stimulating the nation's merchant marine, subsidized a number of shipping lines.

During the nineteenth century both the national and municipal governments were expanding the scope of their functions. They built roads, constructed sewers, installed street lighting, extended public education, and performed an increasing number of such necessary services that could not be furnished profitably by individual enterprisers. Although these activities constituted exceptions to the theory of complete *laissez faire*, they were regarded as legitimate governmental functions by the advocates of that theory, as being for the general public welfare.

Factory Acts. The most conspicuous hardships cre-

ated by the application of the policy of *laissez faire* appeared in the new factories. In the early days of the new industrial regime when factories were located in rural sections labor was scarce, and it became customary for the factory owners to obtain pauper children from city workhouses to operate the machinery. They were usually housed in barracks, and in many instances worked in two twelve-hour shifts, one group occupying the beds while the other half labored. Some of them were only seven years of age when they were "bound out", and it is not difficult to imagine the effect upon them of poor food, miserable shelter, ceaseless toil and harsh treatment.

When steam power caused factories to be established in cities, the pauper children were no longer bound out in this fashion. But conditions were scarcely better, for then the children of the towns and cities could be employed, and they received much the same treatment. As night work was common, children often fell asleep at the machines, and were sometimes injured. Usually they had to eat their meals while tending the machinery, snatching a bite whenever possible; and they cleaned the machines while in motion so as to save time. There were no safeguards to protect the workers, whether children or adults, and accidents occurred repeatedly. For the most part the factories were unsanitary, poorly lighted, improperly ventilated, and unhealthful. For men, women, and children alike the conditions were unbelievably bad.

These conditions eventually came to the attention of the public, and it was obvious that the factory system

under free private enterprise produced conditions that necessitated government intervention. Pleas of reformers and enlightened statesmen that laws be passed to prevent such abuses met with intense opposition from factory owners, who denied the existence of such extreme conditions. The supporters of factory legislation appealed to the humanitarian instincts of the English people to wipe out such inhuman practices which demoralized children, prevented their education, and stunted their physical growth. Notwithstanding the economic doctrines of the time, they demanded that the government protect those, such as women and children, who could not protect themselves under the system of individualism.

On the other hand, the opponents of factory legislation denied that conditions were any worse than they were in other countries or than they had been under the old domestic putting-out system. In fact, some of the most eminent men in the country insisted that child labor was to be encouraged, because not only could the children help thus to support themselves but also because "idle hands are the devil's workshop" and usually get into mischief. A few of the more humanitarian employers asserted that under the competitive system they were forced, against their will, to conform to the low standards of their worst rivals. Practically all employers declared that such legislation would raise the costs of production so greatly that English manufacturers would not be able to compete in foreign markets with their low-wage competitors of other countries. It was said that such labor regulations constituted an un-

reasonable interference with the liberty of individuals to hire and be hired and to make private contracts covering hours, wages, and working conditions. Centuries of experience with unsuccessful government control had proved that it should not be instituted again. In addition, it was pointed out that the entire proposals were unsound in economic theory. Natural economic laws existed which controlled wages, profits, and conditions of employment, and to interfere with them might prove harmful as well as futile.

Despite these arguments, Parliament, after an investigation had disclosed the deplorable situation, passed a series of factory acts which abolished many of the abuses and radically improved general laboring conditions. It was found that English industry was not destroyed thereby, but that on the contrary the efficiency of the workers was usually increased when their working conditions were improved and hours were shortened.

The first factory act, passed in 1802, applied only to pauper children in cotton factories. Its principal provisions were to prohibit the binding out of children under nine years of age, to restrict their hours of labor to twelve a day, and to forbid night work for them. Numerous additional laws, which strengthened their enforcement and extended the scope of control, were enacted during the next several decades. By 1875 in all industries the hours of work were limited to ten hours a day for women and to half time for children; night work by either women or children was prohibited; and

the minimum age for employment was ten years. Subsequently the minimum age was raised gradually to fourteen years.

Other Regulations. Government regulation also became necessary in the mining industry. It had been declared that labor conditions in the worst factory were more satisfactory than those in the best coal mine, and the investigations of a government commission tended to substantiate the statement. It was found that children went to work in the mines at five, six, and seven years of age, that all day little girls of six or eight dragged fifty pounds of coal in buckets on their backs up steep ladders to the mine opening, that hours of labor ranged from twelve to fourteen a day, that girls and women did the same work as men, and labored half clothed along with men who were naked, that they crawled on hands and knees along low passageways two feet high pulling cars containing four or five hundred pounds of coal. The necessity for regulation was obvious. Legislation passed in 1842 prohibited any underground work by all females and by boys under ten years of age. Subsequent laws limited the hours, improved the working conditions, and increased the safety of mining.

Eventually government regulation appeared in many other lines, particularly in the low-paid sweatshop industries. The general principle was adopted in labor relations that women and children, and in many instances men, did not possess equal bargaining power with their employers and were not able to protect them-

selves under the profit-making system of free private enterprise; therefore, government safeguards were necessary.

Such exceptions as these constituted basic attacks upon the validity of the *laissez-faire* theory. They were extreme examples of the evils that were engendered by *laissez faire* and were thus the first to be remedied. With the rise of many other abuses it became a matter of public policy to determine at just what point regulation should be applied and how far it would go. As the nineteenth century progressed, the government exerted an increasing amount of control and participated more actively in economic affairs, until by the end of the century *laissez faire* was disappearing rapidly. In the United States the intense spirit of individualism postponed intervention by the government to a later period than in England; and because of different conditions it occurred first in other fields than in labor relations. But by the beginning of the twentieth century the extension of social control over private enterprise was also advancing markedly in America.

PART FOUR

MODERN ECONOMIC SOCIETY

C H A P T E R X V

Development of Industrial Production

IN a previous chapter the development of American industry prior to the Civil War has been described. There it was observed that, in the years before 1860, the beginnings of an industrial revolution in this country brought numerous changes in the early industrial life typical of colonial times. Since 1860 this development has continued at an increasing pace, until American manufacturing has attained a dominant position over other types of productive activity. This expansion of manufacturing has been marked by an emphasis on specialized production, by the widespread application of machine methods, and by an increasing concentration in the control of industry through the device of the corporation.

This chapter traces the development of specialization and machine production during an era of rapid business expansion, accompanied, however, by periodic reces-

further centralization of control emerged as an outstanding characteristic of modern American industry. Indeed, since the Civil War, business institutions have grown larger and stronger until state and federal governments, acting in the public interest, have necessarily turned from *laissez faire* to a policy of regulation. The evolution of this policy will also be examined in the following chapters.

EXPANSION OF AMERICAN INDUSTRY

The Extent of Growth. The expansion of manufacturing in the United States since the middle of the nineteenth century has been little short of phenomenal. The rapid growth that began with the Civil War continued with few interruptions until the depression of the 1930's. The value of manufactured products increased from a billion dollars in 1850 to 13 billion in 1900, to 70 billion in 1929, and to record high figures during the Second World War. Although rising prices account for some of this advance in value, the actual increase in productivity was tremendous.

Early factories expanded, former domestic manufactures were mechanized, and new industries arose. Industries that had already been mechanized expanded greatly and adopted many new improvements. This was particularly true of cotton and woolen textiles and of the iron and steel industries. The fabrication of machinery increased in importance as mechanization spread and manufacturing expanded. The manufacture of a number of products, such as clothing and shoes, formerly produced under the domestic putting-out system, became

concentrated in factories and developed into large industries. Food manufacturing also increased greatly as the country became urbanized. Baking, canning, butter and cheese production, as well as meat packing, developed into huge factory industries.

Many new types of manufactures appeared during this period. The American chemical industry was born during the First World War, and the moving picture, radio, airplane manufacturing, synthetic fabric, and plastic industries also had developed by the Second World War. But the most amazing industrial spectacle of the period was the rapid growth of the automobile and electrical industries. The former, not mentioned in the census of 1900, leaped to first place among all manufactures in 1929. Its development stimulated the growth of a multitude of satellite industries, such as petroleum, rubber, glass, upholstery, and many others. The rise and expansion of the electrical industry has caused practically a second industrial revolution, even as steam power was the basis of the first. Not only has electricity transformed lighting, communications, and to some extent transportation, but as a source of power it is rapidly displacing steam and exerting a tremendous effect on the size, technique, and location of industrial plants.

Periodic Recessions. This remarkable growth of American manufacturing industry has been checked from time to time by periods of business depression. Such recessions, while affecting the entire economic life of the country, have been particularly severe in their effects on manufacturing. In fact, American economic history is marked by a long series of such periods of maladjust-

ments, all of which were intensified by the development of credit, by greater investments of capital, and by the increasing interdependence of one economic group upon another through the medium of the price system. Previous depressions in England and Europe, though usually concurrent with excessive speculation, had been due primarily to interruptions in agricultural production and in commerce. Later crises came more and more to be disturbances in the financial and credit structure, accompanied by maladjustments in industry.

Although there had been several earlier depressions, the first major recession in the United States was that following the panic of 1837. The basic cause was the speculative overexpansion of the country, particularly with respect to internal improvements and the buying and selling of public lands. The spread of the crisis brought depression in all branches of economic life. Several states repudiated their debts, and a special lenient bankruptcy law was passed by Congress. Production declined, wages were cut, and unemployment was heavy in the cities. For five or six years, during the process of liquidation and readjustment, the nation was economically distressed.

Several minor recessions were experienced during the next few decades, but in 1873 another severe reverse was suffered by the rapidly developing American industry. The crisis of that year was apparently caused by a too hasty industrial and railroad expansion. During the period of depression that followed, credit contracted, prices declined, and thousands of business failures occurred. Retrenchment, liquidation, and readjustment re-

quired five or six years, entailing a long period of intense hardship and suffering.

Eventually the developing country overtook the expanded productive capacity, and the economic progress of the nation continued with but two or three minor interruptions until the crisis of 1893. During the subsequent depression, security prices collapsed, trade and industry became disorganized, and bank and commercial failures were numerous. The decrease in industrial production caused widespread unemployment, many strikes and riots occurred, and farm prices reached the lowest levels in the history of the nation. It was not until the turn of the century that definite prosperity returned.

During the next twenty years there were five temporary recessions, in 1903, 1907, 1911, 1914, and 1920. Of these, the most important was that which occurred in 1920. The following depression was a period of readjustment from the serious economic dislocations concomitant with the First World War. Although the depression was short and the nation seemed to be progressing rapidly toward what many thought was a "new economic era", the war dislocations were never completely readjusted. In addition, there was an enormous expansion in manufacturing industries (part of which was a legacy of the war), and an apparent overinvestment of capital in machinery and industrial equipment comparable to the overexpansion of internal improvements in 1837 and of railroads in 1873. The overbuilding of industry was stimulated by the reinvestment of huge earnings, by the tariff policies of the country, and, according to some authorities, by the supporting credit

policies of the federal reserve banks. This situation culminated in the crisis of 1929.

The depression following 1929 was one of the worst the country has suffered. Security prices tumbled, the prices of manufactured products began a long decline, and world agricultural prices descended even further to the lowest levels since Elizabethan times. Production decreased, unemployment rose rapidly to new record heights, and wage rates and total wages paid dropped disastrously. As prices fell, production declined, employees were laid off, and as they could purchase less than before, this diminished demand caused prices to fall faster, and the vicious circle appeared to have no ending.

Various methods to achieve recovery centered largely around the policies of the federal reserve banks and the operations of the Reconstruction Finance Corporation created in 1932; but these were greatly expanded into a many-sided program for recovery and reform after 1933. Recovery from the depression of the 1930's became marked after 1935, and American manufacturing industry once again progressed rapidly toward higher levels of production, reaching a new peak during the Second World War.

SPECIALIZATION

Another outstanding characteristic of American manufacturing has been the continued increase of industrial specialization. The inhabitant of medieval England was forced by necessity to supply nearly all of his own daily wants. A person in modern economic society, however,

supplies by his own hand very few of his needs. He generally follows one occupation and with the money thus earned, purchases the many other commodities and services that he requires.

Occupational Specialization. Economic society consists of groups of individuals performing special tasks. The work of production and distribution, for instance, is divided into numerous individual tasks requiring special skill or knowledge. This is usually called division of labor. Shoes, for example, are not the product of one skilled craftsman, as was true in the past; they are the combined product of skilled tool makers, of skilled machine operatives, of bottomers, of lasters, of cutters, and many others. Because of wide publicity, the minute division of labor in automobile factories is known to all, but similar methods have been applied in many other industries.

Occupational specialization has enabled mankind to possess an increasing amount of goods and services, for the person who does the same thing many times becomes far more expert at his task than the person who performs a different task every hour or so throughout the working day. The specialized worker can, therefore, produce more than the Jack-of-all-trades. A worker who continuously does the same task wastes little time going from one occupation to another; he wastes no material while once again he is "getting his hand in"; and he secures the maximum output from the machine.

But disadvantages arise from such extreme individual specialization. If a change in demand or a business depression makes a particular skill useless, the specialist

in that task loses the value of his training and is unprepared for other skilled positions. During the depression of the 1930's hundreds of hosiery workers were discharged in a southern city because a fickle feminine public no longer bought seamless hose. Railroad engineers were forced to take unskilled jobs, because their specialized skill was not salable when depression reduced railroad traffic. Another disadvantage is the monotony that usually accompanies specialization, particularly in unskilled tasks. On the other hand, this disadvantage may well be overestimated. Perhaps with a shorter working period the worker has sufficient free time for the expression of any creative instinct he may possess.

Specialization in the Business Unit. Many plants in modern industry are devoted to the manufacture of a single commodity; many others produce merely a single part of an article. In this way the benefits of specialization are obtained in that plant. For instance, cotton mills owned by Johnson and Johnson or by the Kendall Company ordinarily produce nothing except specific types of surgical dressings; and steel rails are produced in a very few plants in the United States.

The advantages of such plant specialization are well illustrated by comparing the mills of the surgical dressing companies with cotton mills producing a variety of cloth. Different patterns require different machine set-ups. Every time the set-up is changed, work on the machine must stop for a period. When a machine is employed constantly on a certain size of surgical dressing, no time is lost in adjusting the machine. In a plant

devoted entirely to the manufacture of one commodity, there is more opportunity for the improvement of manufacturing technique. Concentration and study may indicate more efficient methods, whereas the management of a plant producing many commodities has little time to devote to the improvement of any one.

Plant specialization, however, may also have its disadvantages. If the specialized plant is independently owned, a sudden change in the market may force the company out of business, even as a sudden decline in the demand for a highly skilled specialist may reduce such a worker to the status of an unskilled laborer. Furthermore, an industry that depends upon the products of numerous specialized plants may be paralyzed by a shutdown in any one of them.

Geographical Specialization. Familiar to all is geographical or territorial specialization, which includes international specialization as well as specialization among different sections of a country.

There are many reasons for this type of division of labor. Differences of climate make it possible to grow cotton in the South and impossible to grow it in New England, and make Brazil a coffee exporting country and the United States a coffee importing country. Familiar, too, is the varied distribution of natural resources, which limits gold mining to those parts of the world where the ore is found, and which makes it necessary for the United States to import tungsten and radium.

Other factors also account for territorial specialization, and usually it is a combination of several factors that determines the establishment of an industry in a

particular section. To manufacture some products made from bulky raw materials, plants must be located near the raw materials. This is true of meat packing, flour milling, furniture making, canning, and the like. On the other hand, certain plants, producing such commodities as clothing, silk, and carpets, should be adjacent to their markets. Sometimes when business has been started in the vicinity of the market for its products, it may continue to operate at the same location even though the market moves. Thus, many shoes are still manufactured in New England, though the center of population is in the Middle West. One industry will often draw others of the same type to it, and occasionally the need for subsidiary products in an industry may attract manufacturers of those products to the vicinity of that industry.

Nearness to a source of power, either on streams or near coal fields for steam, has determined the location of many establishments. With the increasing ability to transmit electric power over long distances, however, nearness to power sources will be a less important factor.

Many concerns are established near a labor supply of a special type. In a particular locality workmen become skilled in some line, and new plants settle there to have a skilled labor supply. Or the reason may be the cheapness rather than the skill of the labor. Moreover, industries using male labor often attract factories that hire the wives and daughters of those workers. For example, knitting mills have sometimes been established in coal-mining centers.

Finally, of surprising importance in local specialization is merely the momentum of an early start, though

the reason for the original establishment of the industry may have been lost in history. The origin may have been due to a favorable circumstance or to simple chance, but eventually huge factories have often resulted. The location of glove factories in Gloversville, New York, and carpet factories in Amsterdam, New York, are examples.

All of these factors have affected industrial specialization in various sections of this country. There are several reasons why New England early became a manufacturing center. A poor agricultural soil, abundant water power, and capital available from commercial profits combined with other considerations to give this section an industrial superiority that it has largely retained. The Middle Atlantic states possess every advantage for industrialization except a few raw materials, and consequently these states have developed into the most important manufacturing area of the United States. There has been, however, a decided westward movement of industry, caused by the great increase in the population of the West, the rich natural resources of the region, and the necessity for certain industries to be near agricultural areas. The Middle West is the second most important industrial section of the country, and now rivals the East in the value of manufactured products.

Several southern states have enjoyed a recent rapid industrialization which may continue. The spectacular movement of the cotton textile industry from New England to the South, the extension of lumbering, and the development of mineral and oil industries are the principal factors that caused the South to produce about

seventeen per cent of the total value of manufactures of the United States in 1939. During the Second World War industrial production of the Pacific states, in the past based primarily on agriculture and lumbering, expanded with the manufacture of airplanes and ships.

Whatever be the reason for geographical specialization, it, like other types, leads to more efficient production. This is particularly evident when the specialization is the result of some climatic advantages, but it is also true when workers and managers in a locality have had specialized training. When one nation or one section of a nation is equipped to perform special tasks, division of labor leads to the production of a greater volume of goods and services, for the the same reasons that specialization is most effective for the individual.

The dangers of too great regional specialization, however, are very real. When the South depended almost entirely upon cotton as its money crop, a drop in the price of cotton was ruinous to the entire section. Such a decline still causes considerable concern, but in addition to cotton many southern farmers now raise truck produce, dairy products, and corn. Agricultural depression brings ruin to a section entirely devoted to farming, and business depression is equally unfortunate for a section primarily devoted to manufacturing.

The present concentration of manufacturing in relatively few counties of half a dozen states may be reduced, and the extreme urban congestion consequently relieved, by recent transportation developments and the wider use of electrical power. As long distance transmission of power becomes less expensive, it will be

feasible to locate factories nearer raw materials and in suburban or rural sections, making possible a more healthy combination of industrial and agricultural activities. The tendency is to shift the location of industrial plants from the larger centers into smaller cities and towns.

General Effects of Specialization. The particular effects of occupational and geographical specialization have been discussed; but there are important general effects that should be considered. True, modern economic life would be impossible without specialization; and through it society may obtain the maximum return in goods and services for a minimum effort. Nevertheless, the very fact that society is so highly specialized raises problems that must be faced if mankind is to obtain the maximum benefit of division of labor.

More than ever before, people are dependent upon one another, so that if production or distribution is disturbed, repercussions are far-reaching. For instance, a strike in a specialized tool plant practically ties up production of a large automobile company. Such interdependence may necessitate control by society for its protection. Furthermore, division of labor has produced inequality of incomes, for the highly skilled manager and the unskilled worker are both products of specialization. And, finally, specialization has increased the risks of modern business. Diversity may offer a type of insurance against these business risks, but it is costly. The choice must be made between specialization and greater productivity, on the one hand; and diversity and greater security, on the other.

MACHINE INDUSTRY

Another major characteristic of modern American industry is the widespread and increasing application of machinery to manufacturing. Like division of labor, this development has been stimulated by the expansion of industry and by the rapidly growing markets for manufactured goods.

Conditions Necessary for Development of Machine Industry. Before machine manufacturing is practical, certain conditions must prevail; chief among these is the existence of a large demand for the product. A modern machine, producing any of a number of commodities, can manufacture in one day what in former times would have required a year. Impressed by the machine production of the automobile industry, for example, a European manufacturer installed one of the enormous presses used to stamp the fenders of cars. But demand for his car was so limited that in one day his press could manufacture fenders sufficient for a considerable time, during which the press remained idle. Modern machine industry is not profitable unless the demand is sufficiently large to take its products.

Another major factor facilitating machine industry has been the accumulation of capital. Machinery is usually so expensive that very few individuals would have the necessary capital to purchase even a modern loom or spinning frame. The development of the means of mobilizing capital, therefore, has been very important in the growth of machine industry.

A third factor is the existence of adequate power facil-

ities. In this connection, one of the striking events in twentieth century industrial history has been the enormous development of power resources. The two million horsepower of 1870 increased to eleven million in 1900, then doubled to twenty-two million in 1914 and again to over fifty million horsepower in 1939. At the first date, water and steam each provided about half of the power, whereas in 1900 only about fifteen per cent was from water. Because water as well as steam can be used to generate electric power, the use of water has again increased. At the present time, only a small amount of water power is applied directly to turn machinery. Steam, also, is not utilized directly in plants as much as formerly, but water and steam together generate the electricity that furnishes about three fourths of the total power for turning machines.

Development of Machine Production in the United States. The enormous use of machine production in the United States is not surprising when it is remembered that labor has always been relatively scarce in this country, and labor-saving machinery has been constantly applied wherever profitable. This has resulted in the production of machine-made commodities in mass quantities on a larger scale than in any other country. Because of high labor costs, we are at a distinct disadvantage in producing goods requiring a large amount of hand labor.

A striking example of our mass-production processes, and one for which our factories are noted, is the chain operation by automatic machinery. Frequently an unfabricated piece of metal, wood, or other material begins

its journey through the plant to emerge a finished product without having been touched by human hands. This occurs in such industries as paper and flour mills and glass factories. In the iron and steel industry continuous operation exists without the use of the assembly line. From the raw ore at the mine to the finished steel rail or beam, various shovels, cranes, cars, conveyors, loaders, and rollers carry on the productive process with little human aid. In a cigarette plant huge machines turn out thousands of cigarettes a day, while one man occasionally puts a drop of oil here and there and empties the tobacco into a hopper. One girl sitting by the machine extracts an occasional cull and puts the rest of the cigarettes on a tray to be conveyed by endless belt to the automatic packing machinery in the next room. In many industries the trade-mark "untouched by human hands" has long since become a statement of the obvious, for in numerous plants automatic machinery now does the work formerly done by hand.

On the other hand, in automobile and meat-packing plants, for example, workmen perform minute tasks upon the product as it passes. This rapid and efficient production is made possible by the perfection of automatic machinery, by the standardization of products and parts, and consequently in many cases by the use of interchangeable parts.

The development of scientific management has further increased production, both by improving processes and methods and by stimulating the efficiency of workers. In the latter connection the most efficient method of performing a task is determined by experts who cal-

culate the proper time that should be consumed in executing the operation; then a bonus is given to the employee for bettering that time. Scientific management has likewise achieved much success in developing efficient production processes. For example, the standardization of products and the elimination of unnecessary types and sizes have led to large savings through reducing the investment in machinery and supplies. This became evident when 287 kinds of automobile tires were reduced to twenty, and sixty-six shapes of brick to seven. Scientific methods have also been applied to industry, and hundreds of companies maintain laboratories for research in physics, chemistry, and other sciences having a practical application to business.

Effects of Machine Production. Perhaps the most obvious of the many effects of machine industry has been the increase in the productivity of workers. The operator of a modern shoe machine can produce thousands of shoes during the time in which a cordwainer of the Middle Ages could have produced a single pair. Physical productivity per wage earner may be measured by dividing the physical volume of production by the number of workers engaged. In the United States, between 1850 and 1925, the average volume of output per worker increased about fivefold, and between 1919 and 1939 it increased by about fifty per cent, and in some industries the gain was much greater.

This per capita increase in productivity, though accompanied by a smaller increase in income, has made it possible for political orators to point with pride to the bathrooms in the workers' homes, and to various other

luxuries unknown to their fathers. There is no doubt that machine production has increased the standard of living of many industrial workers. Machine industry has given added impetus to specialization, and thus has further increased the amount of goods and services available to all.

But the institution has also produced unfortunate results. The congestion of population in dirty cities that followed the Industrial Revolution has been described in a previous chapter. The slums still found in any manufacturing city stand as mute evidence that machine production is not an unmixed blessing. Each year machine accidents take a heavy toll among American workers, and the speed of modern machine production impairs a man physically when he should still have many years of life before him. Such a waste of human resources, and such conditions as slums, are not a necessary concomitant of machine industry, and the time will probably come when society will enjoy the fruits of the machine without experiencing the unfortunate results.

Another effect of the growth of machine industry has been the increase in the capital investment per worker. In 1849 this investment was about \$560, and by 1939 it had increased to about \$10,000. This change is significant because of its effects upon the economic status of the worker. The journeyman of the Middle Ages could easily obtain the capital necessary to become an enterpriser; the worker in 1849 might have started his own shop; but the modern worker is faced with an almost insurmountable difficulty if he desires to enter business for himself.

In addition to contributing to the risks of accidents and premature old age, the machine may aggravate unemployment, either when the enterpriser is forced to close his plant or when the invention of an automatic machine makes the skill of the worker valueless. The manufacturer likewise faces new risks. Fixed costs in a machine industry are a most important part of a producer's expenses of production. The machine cannot be taken off the pay roll during slack periods, and it depreciates in value even when idle. Such costs vary little, regardless of the number of units produced. Under these conditions, an enterpriser faces greater financial risks than producers of earlier times ever experienced.

C H A P T E R X V I

Concentration of Industrial Control

THE expansion of industry, with the concomitant development of specialization and machine production described in the preceding chapter, has been accompanied by changes in the forms of business organization. Not only has this been manifested in the rise of more complex types, but these new forms have developed features adapted to the requirements of mass production and large-scale enterprise. A striking phase of this trend has been the concentration of the control of industrial enterprise proportionately into fewer and fewer hands. Furthermore, the decrease in the number of competing business units has visibly affected the relationships among business management, employees, investors, consumers, and the government.

FORMS OF BUSINESS ORGANIZATION

Since the time when man stopped producing everything for his own needs, there has been a form of busi-

ness organization in which some members of society have performed services for others. In the medieval period the determination of those members was generally a matter of custom, whereas under the existing profit system of free private enterprise, various members of society choose to organize a business and produce commodities for others because they believe by so doing they will make a profit. At various times in late medieval and modern history new forms of organization for the conduct of business have originated. Today, examples are found in this country of practically all of these forms, but the three most important are the individual proprietorship, the partnership, and the corporation.¹

Individual Proprietorship. When a man invests his own or borrowed capital in a business of which he is sole owner and operator, he adopts the individual proprietorship form of organization. The advantages and disadvantages of such a form are immediately apparent. The responsibility devolves entirely upon one person; that person, being vitally interested, will probably work arduously to insure the success of the enterprise; the management and the business itself are flexible. If the owner decides on a change of policy, no one else has to be consulted. If he wishes to move his business to another city or state, he is at liberty to do so. Finally, his business secrets remain his own until he chooses to divulge them. He has to make no public reports to stock-

¹ Of increasing importance in recent decades has been the growth, especially in some European countries, of consumers' co-operative societies as a form of business organization. This method of organizing economic activity replaces individual ownership and control with group ownership and control, presumably in order to benefit society as consumers rather than to benefit individuals as producers.

holders, and fewer to the government than are required from other forms of business organization.

But the amount of capital that can be raised by an individual proprietor is usually limited to his own personal resources, and, furthermore, he is liable for any debts of his business to the full amount of his own resources. When the individual dies, the business often ends with him; and even if capital is available for expansion, the sole owner often cannot successfully supervise the expanded business. Despite these difficulties, the advantages are such that the individual proprietorship is widely used, especially for businesses requiring detailed supervision and little capital.

The Partnership. Another important form of business enterprise is the general partnership. In such an organization two or more people contract orally or in writing to conduct, as co-owners, a business for profit. In many instances, an individual proprietor's need for help, either with capital or with special skill, has led to the plan of bringing another person into the business. The device is used as a form of modern business organization because its various advantages may in certain instances outweigh its disadvantages. It is comparatively easy and inexpensive to organize. No charter need be obtained from the state and no contract need be filed with any public body unless the partners so desire. For many businesses the unlimited liability of each of the partners for the debts of the partnership is a valuable adjunct. Because of this personal liability, brokerage houses ordinarily are partnerships, as are many private banking houses and law firms. Ordinarily the partners work

directly in the business and are personally interested in the most efficient management. In addition, the partnership has some of the advantages of the sole proprietorship in that the management is comparatively flexible.

The several disadvantages of the general partnership, however, limit its applicability. As the partners are mutual agents, any partner may legally bind the partnership to an agreement. Upon the death or withdrawal of one partner, the partnership is terminated. It may, of course, be immediately renewed with new partners, but there is an element of instability in this possibility of dissolution. As with the proprietorship, the capital of a partnership is limited to the combined capital of the partners, which precludes large accumulations of capital. Ordinarily, the borrowing power of the partnership depends entirely upon the credit of the individuals, not of the firm. And probably most important, partners are each individually liable with all their personal property for any and all debts of the partnership. The owner of considerable capital, who becomes the partner in a business, is running the risk of losing much more than he has invested.

The Corporation. Apparently the most successful method of mobilizing capital and using it to operate a business is by means of the corporate form of business enterprise. A corporation is a voluntary association of individuals which, as an artificial person in the eyes of the law, is endowed by a charter from the state with autonomy, numerous privileges, and continuity of existence. Obtaining capital is comparatively simple under the corporate device. Shares of ownership called "stock",

and evidences of debt called "bonds", are divided into small units, and thousands of investors are enabled to furnish the capital for the company. They are the more willing to do so because of certain other attributes and privileges of the corporation. In the first place, owners of stock shares have limited liability, which means that in the event of the failure of the corporation the owner is liable only for the amount he has actually put into the business or has pledged himself to invest. His private resources cannot be touched if the corporation in which he owns stock fails with an accumulation of debt. He loses his investment in that company, but nothing more. This, of course, is of extreme importance to a person desiring to invest, but not wishing to take the chance of losing all his capital.

Furthermore, these shares that the investor buys are transferable. If he were a partner, the entire partnership would be dissolved if he found it necessary to withdraw his capital. Corporate shares may be sold at practically any time, and the ownership shifted from one person to another, without in the least disturbing the corporate business. This attribute also permits the investor to diversify his investments over numerous industries. As a business enterprise, the corporation has what some please to call perpetual life, though the list of business failures during any business depression indicates that only an optimist can think of the corporation as being eternal. The corporation does, however, have a life of its own, independent of the births and deaths of mere mortals. The shares of ownership are not extinguished upon the death of the owner, but continue to be

held by someone or an estate. This situation tends to give the investor a sense of confidence in the business and has been an important reason for the growth of the corporation.

Many kinds of stocks and bonds are issued by corporations to secure capital. Stocks are legal shares of ownership in the corporation; whereas bonds are evidences of debt, and the bondholder is a creditor of the corporation. In modern corporate practice the line between the two is not sharply drawn, for in case of a default in interest payments the bondholder may sometimes have a vote in the management of the corporation, while certain varieties of stockholders have none.

Stock is usually classified as common or preferred. The preferred stockholder ordinarily receives a limited dividend, frequently similar to an interest payment, and obtains it before earnings are paid to common stockholders. He also normally enjoys preference if the assets of the company are sold and the proceeds divided among the claimants. Although preferred stock usually does not possess voting power in the selection of management, it may exercise that privilege under some circumstances. The rate of dividends on preferred stock is usually from four to eight per cent. This is somewhat higher than the interest rate on bonds, because bondholders have claims, both to earnings and to assets, that take precedence even over those of the preferred stockholders.

Common stock represents the residual claim of the owners to the assets and earnings of a corporation. Each share of common stock usually entitles the owner to a

vote in the election of a board of directors to manage the concern. As the residual claim of the common stockholders is usually the most risky, they logically should get the larger profits from the business, if there are profits. When common stock represents an actual investment of capital in the corporation, there is indeed a greater risk of actual loss. But the modern practice frequently is to issue common stock as bonuses to the promoters or to the purchasers of the preferred stock and bonds. Under such circumstances the common stock itself represents no investment, and there can hardly be said to be any risk of loss on it. The value of the common stock generally depends upon the past and expected future earnings.

The bond owner is a creditor of the corporation. He has loaned money to be repaid by the corporation at some future date with interest payable regularly at a specified rate per cent. Often he holds a share in a mortgage on the property as security for his loan. That is, if the corporation does not meet its obligation to them, the bondholders have the right, under the terms of the mortgage, to take over the property and dispose of it as they see fit. Under such circumstances the stockholders are liable to lose all of their equity (or ownership) in the business, unless the bondholders allow them to come into the plan of reorganization on condition that they pay specified assessments according to their holdings of stock. The chief protection to the bondholder lies in his prior claim to the earnings and assets of the corporation as compared with the preferred and the common stockholder.

Importance of the Different Forms. One of the outstanding features of the modern economic system is the extent to which business has come to be carried on by corporate organization rather than by individual enterprise or partnership. This movement, of course, has gone further in some industries than in others. During the first half of the nineteenth century the formation of corporations was limited largely to financial institutions and transportation companies. However, as the expansion of industry created greater risks and required larger amounts of capital than the prevailing individual firms or partnerships could undertake, the corporate form was soon adopted by manufacturing industry. It has spread rapidly until it has become dominant in modern business.

Today, the corporation is employed principally in the manufacturing enterprises of the country, the public utilities and transportation, the extractive industries aside from agriculture, most of finance, and a considerable part of trade. Individual proprietorships continue to dominate agriculture, and are important in retail trade, hotels, and professional services. Partnerships have also tended to persist in some of these lines and are especially common in certain fields of finance. The following table, which contains approximate figures, gives some idea of the relative importance of the three types of business organization, and indicates the extent to which the corporation has outstripped the others in terms of the value of goods produced by manufacturing enterprises.²

² United States *Census of Manufactures*, 1939, vol. I, p. 230.

FORMS OF BUSINESS ORGANIZATION IN MANUFACTURING
INDUSTRY IN THE UNITED STATES

FORMS OF ENTERPRISE	PERCENTAGE OF TOTAL NUMBER	PERCENTAGE OF TOTAL PRODUCTION
Individual Proprietorships	33	4
Partnerships	15	3
Corporations	52	93

LARGE BUSINESS UNITS

Concentration of Production. No less striking than the predominance of corporate enterprise in manufacturing industry is the degree to which business has come to be carried on by large concerns, with tens of thousands of employees and with property worth many millions of dollars. Before the middle of the last century, the small enterprise, usually owned and operated by an individual proprietor or a partnership, was the typical form of business. The yearly value of the products manufactured by the average establishment was only \$8,000 in 1850. This increased to well over \$300,000 in 1939. In that year about five per cent of all concerns each produced over a million dollars' worth of products, and together they accounted for over two thirds of the total value of all commodities manufactured. Less than one per cent of all establishments produced about forty per cent of the total value of products manufactured.³

Such concentration was a result of the Industrial

³ *Ibid.*, p. 182.

Revolution and the consequent mechanization of industry in this country. The most efficient utilization of machines, labor, and resources required large-scale production. On the other hand, mass demand for industrial products expanded with the widening of markets that followed the improvements in transportation facilities and the rapid increase in population. The concentration of manufacturing into large business units to meet this demand, as already indicated, was greatly promoted by the rapid growth of the corporate form of business organization.

A manufacturing establishment may become large either through the expansion of a small plant into a large one or through the combination of several different plants into one organization. A number of factors may account for the growth of a large manufacturing plant from a small one. Likewise, the formation of a large central combination of separate plants may create advantages not achievable by a single concern. The advantages of large-scale production and of industrial combination can be secured without resort to monopolistic actions, for many large unit plants or several combinations may exist in an industry and compete keenly with one another. Whether competitive or monopolistic, however, there has been a striking tendency in this country toward the combination of plants into large central organizations.

Growth of Combinations. During two periods in our history, from 1875 to 1904 and in the decade of the 1920's, large-scale combinations were formed in great numbers. After the Civil War, conditions were favor-

able for concentration. As the government was pursuing a policy of extreme *laissez faire*, there were no legislative interferences. The development of large factories and the increasing use of the corporate form of business, both of which accompanied the expansion of machine production, facilitated the process of combination. In addition, the general, though irregular, decline in the average level of prices for three decades after the Civil War tended to cause a reduction in profits, which stimulated producers to combine for the purpose of raising prices.

These combinations assumed many forms, which varied according to the needs and limitations of the time. Because they were difficult to enforce legally, the early agreements and pools, formed by competing producers to fix prices or divide the available business, did not prove particularly successful. The more centralized trustee device, which concentrated the control of several concerns in the hands of a board of trustees in a contractually binding manner, ran afoul of the common law prohibitions against monopolies. The holding company, a corporation that owns the stocks of other corporations, was soon adopted as the perfect device for concentration and monopoly, and the combination movement proceeded rapidly during the years from 1897 to 1904. Between those years a speculative public purchased several billion dollars worth of securities, many of which were "watered stock", that is, without property values behind them. It has been estimated that over three hundred combinations were formed, controlling over five thousand plants and capitalized at about seven billion

dollars, of which one third was commanded by seven mammoth holding companies.

Though all of these combinations were not necessarily monopolistic, the great majority had that effect. In 1904 about two fifths of the total manufacturing capital of the country was controlled by monopolistic organizations, but by that year the movement had practically exhausted itself. Several examples of fraudulent practices and financial abuses came to light and caused a reaction among both investors and the general public. In addition, in 1904 the Supreme Court rendered a decision in the Northern Securities Company case, declaring that although a holding company was a legal business device it could not be used as an instrument to create a monopoly. Thereafter, the forms of combination were altered to conform with the law, and other types have since been utilized as industrialists have been forced to resort to looser and less tangible forms of monopolistic control.

A second wave of combinations swept the country in the decade of the 1920's. The fear of prosecution under the anti-trust laws was, in the main, removed by the lenient policies of the Department of Justice. The hostility of the public toward combination and monopoly was reduced by the rising standard of living during the period of prosperity and by a realization of the benefits resulting from co-ordination during the war. This attitude was fostered by constant propaganda of business men against the regulation of industry by government. Furthermore, new industries such as the automobile, the radio, utilities, electrical products, moving pictures, vari-

ous food products, and retailing concerns had developed and were ready for concentration by the promoter and monopolist.

The combinations were consummated principally through mergers and holding companies. Many of them were not monopolistic in nature, but co-operation was rendered much easier, and quasi-monopolistic practices became widespread. Although statistical data are incomplete and confusing, it has been estimated that over six thousand independent manufacturing concerns and about four thousand utilities were combined during that decade. In total capital affected, this second period of combination exceeded that of the nineties. When the crisis of 1929 brought the second period to a close, a few hundred corporations controlled over half of the industrial capital of the country, and apprehension was frequently expressed over this high degree of concentration.

Some indication of this concentration is to be found in the table on the following page, which classifies the 407,053 corporations of 1941 according to the size of their assets.⁴

It is noteworthy that 826 corporations out of over four hundred thousand, or about one fifth of one per cent of the total, had more than half of the total assets; whereas 213,086 concerns, or more than half of the entire group, had less than two per cent of the assets.

Effects of Concentration. Large-scale industry using the corporate device has affected greatly the character of modern economic life. The corporation has frequently been used in ways that create social evils. Actions of di-

⁴ *Statistical Abstract of the United States, 1944-45, p. 299.*

INDUSTRIAL CONCENTRATION

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THE NUMBER AND ASSETS OF AMERICAN CORPORATIONS
CLASSIFIED ACCORDING TO SIZE

SIZE OF CORPORATION AS INDICATED BY TOTAL ASSETS (THOUSANDS OF DOLLARS)	NUMBER OF CORPORA- TIONS REPORTING	TOTAL ASSETS OF CORPO- RATIONS FALLING IN THIS GROUP (IN BILLIONS OF DOLLARS)
Under 50	213,086	4,013.2
50 to 100	61,525	4,384.7
100 to 250	60,386	9,546.7
250 to 500	28,751	10,122.2
500 to 1,000	18,424	12,914.7
1,000 to 5,000	18,832	39,213.7
5,000 to 10,000	2,812	19,571.3
10,000 to 50,000	2,411	49,185.9
50,000 and over	826	191,499.8
Total	407,053	340,452.2

rectors are often subject to only slight control by the stockholders who elect them. There has been an increasing tendency for the control to be divorced from the legal owners of the corporation (the stockholders) and concentrated in management; and once a management group has obtained control it is difficult to dislodge it. So long as the interests of management and the interests of owners coincide, specialized management is no doubt advantageous to the owners. But when the interests of management differ from those of the owners, the latter usually lose. Who can say that officials of large steel companies must be paid annual million dollar bonuses in order to evoke their best work? Numerous financial abuses and investment frauds have been perpetrated, occasionally to such an extent that even the rights and privileges of different security issues are confused. Fur-

thermore, in many instances the corporation has been used as a tool to promote monopoly.

Nevertheless, there are few who would desire a complete return to small-scale industry. The advantages of large-scale enterprise outweigh its disadvantages, especially as those disadvantages are probably not inherent in the system itself, but arise out of its abuse.

Large-scale industry is so powerful and plays such an important part in society that it has assumed an almost quasi-public nature. Its interests are so varied and government action may affect its profits so greatly that there is an ever-present danger that the corporation will attempt to control the government. Because of these factors, it is widely believed that the activities of the large business unit must be regulated lest it become more powerful than the state itself.

GOVERNMENT REGULATION OF MANUFACTURING INDUSTRY

The various abuses that have arisen in American industry, particularly those accompanying the combination movement, have been serious. As a result, the federal government has been disposed to exercise increasing control over industrial activities. In considering the attitude of the federal government toward business in this country, three separate periods and policies are discernible. Prior to 1890 a policy of *laissez faire* was followed. As a consequence, competition existed in some industries, while in others widespread monopoly appeared. From 1890 to 1914 attempts to create monopolies were prohibited by law, but little effort was exerted to regu-

late competition through the control of trade practices. Since 1914 a dual policy of prohibiting monopoly and maintaining fair competition has been embodied in the statutes. This regulatory program has been enforced with varying degrees of success, and the future policy of the government toward industry is uncertain.

Results of Laissez Faire. During the nineteenth century the doctrine of economic individualism dominated economic relations in the United States, and free private enterprise flourished unrestrained. Practically the only relations of government with business were to foster it with gifts, bounties, and protection, for nearly all Americans believed unregulated competition was necessary to secure the full development of our natural resources. To subject private enterprise to any regulation, it was thought, would not only violate the natural rights of a free people but would be injurious alike to the individual interest and the public welfare. The freedom of action necessary on the frontier appealed to the pioneer spirit of the entire country.

The results of this policy, however, were not altogether what had been anticipated. As the factory system expanded, the heavy fixed investment of capital in machines and equipment created greater business risks. To avoid loss, the machines had to be operated continuously at nearly their capacity output. Consequently, competition to sell products over wide areas grew more severe, prices were cut by competitors, and frequently disaster faced many producers. Moreover, unfair competitive tactics and even dishonest methods were employed by one competitor against another. In self-defense competi-

tors began to co-operate through informal agreements and then to unite into more permanent monopolistic combinations. Thus it appeared that concentration and monopoly were the natural and inevitable result of unregulated competition in a machine economy.

Flagrant financial abuses arose, with little restraint being exercised, and the investing public was usually the defrauded victim. Labor was frequently exploited, especially by the combinations, for under free private enterprise equality in bargaining power seldom existed between the individual employee and his employer. Furthermore, the natural resources of the country were being dissipated rapidly and recklessly, and were being concentrated in the hands of a relatively small number of men, who were obtaining control by unscrupulous methods as well as by superior business acumen. In fact, it appeared that in the scramble for riches and power, big business was gaining control of governmental bodies and occasionally was even influencing the judiciary. Thus on every hand it was manifest that unregulated free private enterprise resulted in unfair practices toward competitors, the exploitation of labor, the swindling of investors, the deception of consumers, and a strong tendency toward monopoly. It became evident that unregulated competition could not be relied upon to furnish its own restraints and to protect the interests of various groups.

As the abuses grew more apparent, public opinion began to react against the monopolistic trusts. Monopoly had always been looked upon with skepticism by the average citizen, and now his suspicions seemed to be

well grounded. The public feared especially that the wealth and resources of the country would finally be concentrated in the hands of a few powerful men. Although by 1890 twenty-seven states had passed laws against monopolistic combinations, this legislation was generally inadequate because, owing to constitutional limitations, it could not apply to interstate commerce. Consequently, in 1890 the Sherman Anti-Trust Act was passed by the federal Congress.

The Sherman Anti-Trust Act. The Sherman Act prohibited monopolies and restraints of trade in interstate commerce. The basis of the act was the theory that if monopoly could be eliminated, competition would be effective, and the principles of free private enterprise would operate successfully. For nearly a decade after its passage, however, the Sherman Act was not rigorously enforced and had little effect upon current business practices. In time, the feverish growth of the combination movement at the turn of the century caused public opinion to revolt against the accompanying financial excesses of the period. Led by President Theodore Roosevelt the government undertook a number of prosecutions under the Sherman Act, several of which resulted in victories for the government. Eventually, in 1911, both the holding company of the Standard Oil Company and the merger of the American Tobacco Company were declared illegal by the Supreme Court and were ordered to be dissolved. These decisions seemed to show that huge monopolies could not continue to be immune from prosecution.

Despite this progress in combating the trusts, it be-

came increasingly apparent that a mere anti-monopoly policy was inadequate for the effective regulation of business. The prosecution of combinations under the Sherman Act had revealed many unfair competitive practices, employed both by monopolies and by ordinary competing firms. Misrepresentation, fraud, disparagement of competitors, price discriminations and many other unfair tactics were widely prevalent. Competition was becoming so predatory that efficient concerns were being driven to the wall and eliminated along with the inefficient. Both competitors and consumers were frequently injured by the current business practices, and the Sherman Act, because it applied only to monopolies and restraints of trade, could not prevent their occurrence. That act was not designed to regulate competition, and the belief was spreading that the mere prohibition of monopoly did not necessarily result in the maintenance of fair competition.

The public demanded additional regulation of business, and the type of control to be applied became one of the principal issues in the presidential campaign of 1912. In a campaign based largely upon attacks on monopoly, Woodrow Wilson advocated "the new freedom" of business from monopolistic control and expounded the virtues of competition. He promised, if elected, to secure legislation that would maintain markets open to free competition for all who cared to enter. This was to be accomplished through the prohibition of unfair competitive practices as well as of monopoly, and through the active regulation of business methods by an adminis-

trative body. After his election the anti-trust legislation of 1914 was enacted.

Legislation of 1914. Two laws were passed, the Federal Trade Commission Act and the Clayton Act. The former prohibited the use of unfair methods of competition in general, and established the Federal Trade Commission to investigate instances of their occurrence. In the Clayton Act specific unfair practices were enumerated and were declared to be unlawful. The Federal Trade Commission was to administer these provisions and, in conjunction with the Department of Justice, enforce all anti-trust laws.

The theory underlying these two acts was that competition, operating through impersonal economic forces and prices in an open market, is the best regulator of business activities. Previously, markets had been cluttered with unfair practices that defrauded the public and with predatory tactics against competitors that eliminated the efficient as well as the inefficient producers. But it was recognized that government action was necessary to prevent unfair methods and to maintain an open competitive market as a fair field for all buyers and sellers to enter. It was hoped that the 1914 legislation would accomplish that end, that competitors would be protected against unfair practices, and that consumers would be protected from fraud and artificially high prices. Moreover, the belief was general that monopolies were largely the result of unfair methods, and that the elimination of trade abuses would lessen the tendency toward monopoly. If monopolies arose they

could still be prosecuted under the Sherman Act. But the laws of 1914 were considered to be preventive rather than curative, prophylactic rather than remedial.

The results of the policy of regulated competition, in which the government prevents monopolies and unfair competitive practices, have fallen below the expectations of its advocates. Whether the policy itself is unsound when applied to modern industrial conditions or whether it has never received a fair trial is a difficult question. In any event, it has been generally ineffective. The First World War intervened before the new program could be fairly inaugurated, and nearly all regulatory activities ceased as industry was mobilized and co-ordinated for effective wartime production. After the war there was a violent reaction from government supervision, and vigorous enforcement of the anti-trust laws was not undertaken. The federal administration apparently was sympathetic toward big business and consequently the Department of Justice was half-hearted in its prosecutions. The functions of the Federal Trade Commission were further limited by unfavorable court decisions. Frequent political appointees to the Commission noticeably weakened its personnel, and its powers were only indifferently utilized.

The NIRA of 1933. An entirely different theory as to the relation of government to business was expressed in the National Industrial Recovery Act of 1933. Enacted for the purpose of stimulating business recovery from the paralyzing depression of the early 1930's, this law permitted business to regulate itself through cooperative action under the supervision of the federal govern-

ment. This self-regulation was effected through the formulation of codes of fair competition by the producers in each industry. Code provisions were exempt from the anti-trust laws.

Few pieces of federal legislation have created more discussion and controversy than this statute. After industries were codified and the conflicting interests of various groups became apparent, widespread criticism and frequent dissension arose. Among other results of the program were many instances of price fixing, output restriction, and monopolistic collusion. Consequently there was general approval of the Supreme Court decision in May 1935 declaring the law unconstitutional. As a result, the codes became illegal, the anti-trust laws again came into full operation, the Federal Trade Commission assumed its normal regulatory powers, and the policy of self-regulation by industry was widely discredited.

Subsequent Developments. As a result of the NIRA experience, however, several laws were enacted by Congress during the next few years. Among these was the Robinson-Patman Act, passed in 1936, which prohibits certain price-discrimination practices that lessen competition among buyers or sellers. The primary objective of the law was to curtail the growth of chain stores and other large distributors in order to preserve independent retailers and wholesalers. The law has been vigorously enforced by the Federal Trade Commission.

Despite a half-century of government regulation, monopolistic elements appear to be increasing in various sections of the American business system. To determine

the extent, causes, and effects of the decline in competition, Congress created the Temporary National Economic Committee in 1938 to investigate the concentration of economic power in the United States. After three years of study, conducted while war clouds were gathering, the Committee issued an inconclusive report as to future public policy toward business.

The tremendous expansion of industrial production during the Second World War led to increased competition in some industries and to more concentration in others. What the ultimate effect will be on competitive enterprise in this country is uncertain and, consequently, what the future public policy will be toward private industry is not clear. Present tendencies seem to indicate a declining dependence upon competition as the regulator of economic enterprise and an increasing reliance upon social control wherever necessary to protect the public welfare.

C H A P T E R X V I I

Agriculture

DURING the last seventy-five years agriculture in the United States has been marked by varying degrees of prosperity. In the thirty years following the prosperous Civil War expansion, American agriculture rose to a position of such predominance in world markets that America became known as the principal granary of Europe. Paradoxically, however, American farmers at the same time were suffering from a long period of agricultural distress that continued until about 1897. Thereafter, until 1920, despite a sharp relative decline in the importance of foreign markets, farmers enjoyed an almost uninterrupted era of prosperity. The period before the First World War was also featured by the disappearance of free land on the frontier, a marked expansion of domestic demand, and a rapid introduction of far-reaching technological improvements. Most of the years between the First and Second World Wars, however, were filled with difficulties and distress for farmers, who were unable to adapt themselves quickly

to maladjustments created by rapidly changing conditions.

Outstanding among these various features of the agricultural situation since the Civil War have been (1) a remarkable expansion in productive capacity, (2) prolonged agricultural adversity and discontent, and (3) the multiplication of government activities in behalf of agriculture. Each of these phases of agricultural development merits a somewhat detailed consideration.

THE EXPANSION OF AGRICULTURE

The expansion of agricultural production after the Civil War was a consequence not only of the rapid increase in farm acreage, but also of technological improvements and the extension of large-scale farming.

Increase in Farm Acreage. Prior to the enactment of the Homestead Act in 1862, the westward movement of population had been progressing at a rapid pace, but in the following three decades the expansion was doubled.¹ Between 1860 and 1900 the total acreage in farms increased from about 400 million to more than 850 million; in 1940 it was estimated to be in excess of one billion acres. This expansion in agricultural acreage was only partly accounted for by the immediate prospects of profits to be made in agriculture. Indeed, it continued even in periods of agricultural distress, stimulated in part by a speculative optimism that led almost every homesteader to see, with the growth of the country, a prospective fortune in the eventual appreciation in the value of his lands.

¹ See above, pp. 206-214.

Thus, vast areas of virgin territory open for exploitation were put under the plow, and agricultural production increased accordingly, almost without regard to the demands of the domestic market. Consequently, an increasing flood of agricultural products deluged the markets of the world, as exports of cotton, wheat, corn, tobacco, and livestock products mounted from a total quantity valued at about 100 million dollars in 1850 to more than 1,400 million dollars in 1898.

This tremendous expansion in farm production, and in the volume of agricultural exports, occurred despite the prevalence of relatively low prices for the staple products. Not only were the direct costs of production on the rich new soils very low, but the continued improvement of farming methods led to further reductions in costs.

Technological Progress. Agricultural progress has been promoted by the improvement and widespread utilization of farm machinery and by the discovery and adoption of more scientific methods of farming. The mechanization of agriculture has passed through two stages in this country. During the latter half of the nineteenth century, horse-drawn machinery was substituted for hand-operated tools. Later, in the twentieth century, animals were displaced, to a large degree, by gasoline engines.² Light-weight tractors, which could be attached to the old machines as well as to newer and larger implements, proved especially satisfactory on the

² In the single decade following 1920, approximately eight million horses and mules were displaced by tractors, thus releasing for other uses millions of acres of land formerly planted in hay and stock feed for the animals.

broad areas of level land in the western plain states. In some instances not only could several operations be combined in a single, large machine, but frequently two or three machines could be drawn by one tractor, which likewise permitted the simultaneous performance of several operations. The automobile and motor truck, hard-surfaced roads, and rural electrification have greatly altered the character of rural life and have increased the efficiency of farm production.

The principal result of the mechanization of agriculture has been a remarkable increase in productivity per capita. Operating machines, one man can cultivate two or three times as much land as when farming with horses. As a consequence, millions of men have been released from farms to work in urban occupations. The continued increase in the total volume of agricultural production has been accompanied by a decline in the proportion of farm population to total population, from about one half in 1860 to less than a fifth in 1944. With such a saving in labor the cost of production per unit of output has been sharply reduced.

Fully as important, though perhaps less spectacular than the process of mechanization, has been the gradual adoption of more scientific agricultural methods. Developments in various fields of science have made possible the application of scientific knowledge to many aspects of farming. Species of fruits, vegetables, and staple products have been improved, and many new plants have been adapted to American uses. For example, in 1904 alone about fifteen hundred new plants were brought into this country, chiefly through the ac-

tivity of the Bureau of Plant Industry of the Department of Agriculture, which has introduced altogether more than thirty thousand plants. There has been a wider use of fertilizers, and careful studies of the effects of various kinds of fertilizers upon different soils have made possible scientific fertilizer control. Biological research has been directed successfully to the improvement of particular types of livestock adapted to special purposes, such as the production of milk, meat, hides, hair, etc. Great strides have also been made in curbing animal diseases and in eliminating parasitic organisms. As a result, farming has become more of a science and less of an art than it was in former periods.

Large-Scale Farming. With the progress of mechanization and scientific farming, an increase in the average size of farms was to be expected, for machinery and tractors could only be utilized fully and profitably on large areas of land.³ This tendency was stimulated during the First World War as rising prices made agriculture more profitable. The average size of all farms in the country increased from 138 acres in 1910 to 174 acres in 1946. That the number of very large farms has also risen since the First World War is indicated by the increase in farms of over a thousand acres from 67,405 in 1920 to 101,531 in 1940.⁴

Co-operative Marketing. As agricultural production has expanded and become more scattered, farmers have,

³ For example, a survey in Nebraska some years ago revealed that it cost eighty-six cents a bushel to produce wheat on a small farm under older methods, whereas the cost was only thirty-eight cents on a large farm with improved machinery.

⁴ In 1939 there were over eight thousand corporations engaged in farming in the country.

to an increasing extent, sought to aid themselves through combined action. The co-operative movement to obtain the benefits of large-scale methods in marketing was given impetus by the Agricultural Marketing Act of 1929 and the Farm Credit Act of 1933. It is estimated that about eleven thousand co-operative associations possessing approximately two million members sell commodities worth fifteen to twenty-five per cent of the total value of all farm sales. By educating members in better methods of production, and by affording collective action in selling large quantities, co-operative marketing associations have furthered a more economic production and distribution of goods, benefiting both the farmer and the general public.

AGRICULTURAL ADVERSITY

Despite the marked expansion and progress in agriculture since the Civil War, American farmers have experienced two extended periods of hardship and maladjustment. The first covered the three decades after the Civil War; the second followed the First World War.

Falling Prices and Agrarian Discontent, 1865-1897. The long period of hardship after the Civil War was basically the result of the steady decline in world prices occasioned partially by the increasing relative scarcity of gold for monetary use. In the United States, particularly, population and the physical amount of trade increased more rapidly than the volume of money, and prices declined as the value of the dollar increased in terms of other goods. The large expansion in the production of staple farm commodities, following the rapid appropri-

ation of the public domain, also depressed prices of agricultural products. Thus, farmers, who in many cases had borrowed substantial sums to invest in land, buildings, and equipment, found it increasingly difficult to pay with more valuable dollars the debts incurred in terms of cheap dollars when prices were high. When it became impossible to meet interest payments, mortgages were foreclosed and many farmers lost everything they possessed.

Other factors, however, also contributed to the current discontent. Taxes on land became more burdensome, not only because, with falling prices, the sale of more bushels of wheat was required to pay a given money tax, but also because money taxes increased as public improvements necessitated enlarged expenditures. Moreover, the farming classes were dissatisfied with the high rates being charged by the railroads. At the mercy of the roads in the marketing of their crops, farmers felt that they were being discriminated against in favor of more powerful industrial shippers. Finally, the retention of the towering wall of protective tariffs on industrial products imposed during the Civil War raised the prices of commodities that the farmer purchased and at the same time reduced the buying power of foreign markets for American agricultural exports.

From these grievances the farm classes sought relief in many ways. One of their most striking efforts was to prevent the contraction of the currency and, instead, to secure an inflation of prices in order to lighten their debt burdens. They founded the Greenback Party in 1873 for the avowed purposes of preventing the retire-

ment of the Civil War greenback paper money, of postponing the return to gold payments, and of forcing an additional issue of government legal tender paper notes. After the failure to achieve most of their paper money demands, their efforts were turned toward securing an expansion in the use of silver money in the country's currency. Aided by silver mining interests, the farmers attained some success in the silver-purchase acts of 1878 and 1890, but the monetary issue was closed for the time by the defeat of Bryan in 1896 and by the subsequent rise in prices. It was revived again, however, during the period of falling prices in the 1930's.

Greater success rewarded the campaign to reduce railroad rates. The "granger movement", led by the Patrons of Husbandry, was organized in 1867 to aid the farmer in his struggles. Within a few years it had enrolled over a million members in about twenty thousand local granges, and wielded widespread influence. The grangers secured laws in many states regulating railroad rates, and were instrumental in the passage of the federal Interstate Commerce Act of 1887. They also supported the state and federal anti-monopoly laws of the time. The grangers urged the adoption of co-operative buying and selling by farmers as a way out of their difficulties, and much progress was made along that line, especially in the marketing of wheat.

The Trend Toward Agricultural Equilibrium. During the closing years of the nineteenth century, the agricultural situation began to change, and the long period of distress and discontent came to an end. The years from 1897 to the First World War were marked by a

general rise in prices, including those of agricultural commodities; by a pronounced decline in the importance of foreign as compared with domestic markets for farm products; and by a nearer approach to equilibrium between agricultural and industrial production.

The rise in the general price level was a result of the discovery of gold in the Klondike and South Africa, which sharply increased the quantity of money in circulation and thus lowered the value of money in terms of goods. At the same time, the rapid growth in population, largely in the urban areas, caused an increase in the domestic demand for farm products. By this time, moreover, the most promising free land had been brought under cultivation with the disappearance of the frontier, and the production of agricultural commodities did not increase as rapidly as the demand. As a consequence, farm prices tended to move upward, relative to the prices of manufactured goods, and brought to the farming classes a prosperity that they have seldom experienced. With the rise in the prices of agricultural products, the total value of farm crops increased, and consequently the value of land advanced. From 1900 to 1910, for example, both crops and land doubled in value. The improvement in agricultural conditions raised the standard of living of farmers to such an extent that the first two decades of the twentieth century are regarded as the most prosperous period of American agriculture.

One of the striking changes of the period was the decline in the relative importance of the export market, as compared with the domestic market for American agricultural products. To be sure, the aggregate value of

farm-product exports declined only from about 1,400 million dollars in 1898 to about 1,100 million dollars in 1914, but it was maintained at the latter figure only because the continued increase in the exports of cotton, tobacco, and some other specialties was sufficient to offset the rapid decline in the exports of wheat, corn, and livestock products. This changing situation was, in part, a result of the rapid increase in population in the United States, which enlarged substantially the requirements for domestic consumption. It also reflected, however, the effect of protective tariffs levied on important food commodities by a number of European countries, notably Germany and France, to protect their own agricultural interests. Moreover, it revealed the influence of the increasingly severe competition that was being offered the American farmer in world markets by Canada, the Argentine, Australia, and other new producing areas, which were being cultivated in about the same exploitative manner as the American West had been.

In the first two decades of the twentieth century, American agriculture began to adjust itself more fully to the changing situation. The extensive production of cereals and other staple products tended to give way, somewhat, to a more diversified production, in which dairy products, fruits, and vegetables played an increasingly important part. Indeed, the years just prior to the First World War have since come to be regarded as one of "balance" between agriculture and industry in the United States. Throughout the period, however, there was a continuous flow of population from rural areas to urban centers. This movement was caused by the

greater economic and social opportunities afforded in the cities, especially as the introduction of agricultural machinery permitted land to be cultivated with less labor. The period may be regarded as one of balance, therefore, only in the sense that conditions, by virtue of the adjustments that were being effected, were relatively more favorable to agriculture than they had been in the several preceding decades.

The Post-War Maladjustment. The outbreak of the First World War in 1914 abruptly altered the processes of adaptation that had been in progress for nearly twenty years. As foreign supplies decreased during the war, the prices of farm products rose to unprecedented heights under the pressure of both foreign and domestic demand. This caused a considerable increase in the amount of land under cultivation, much of which previously had been below the margin of profitable utilization. Despite a decrease in man power, agricultural output was expanded by the extended use of machinery and improved methods of production. At the same time, high prices and good profits led many farmers to incur heavy debts in purchasing additional land and equipment. The Civil War situation was re-enacted, with the same unfortunate aftermath.

The wartime prosperity was terminated by the collapse of the boom in 1920, when agricultural prices dropped by about fifty per cent. Although manufacturing recovered shortly thereafter and experienced a period of relative prosperity, agriculture was distressed during most of the decade. The development of the depression beginning in 1930 accentuated the hardships

of the farmers, and the prices of some of the staple products fell to the lowest levels in three hundred years.

The post-war farm problem in the United States was primarily the result of a long-run maladjustment between the demand and supply of staple agricultural commodities. As already indicated, about seventy-five million acres of land were brought into cultivation under the stimulus of high prices during the First World War. At the conclusion of the war, however, it was very difficult for the farmers to adjust themselves to the changed situation. The temporary wartime foreign demand for American farm products declined as European countries encouraged their own farmers to promote a more self-sufficient national program. Moreover, upon the restoration of more nearly normal world shipping conditions, new, low-cost areas of production, such as Australia and the Argentine, reappeared in competition for the shrinking foreign markets.

Because American farmers were unable to adjust the supply of staple farm products to the declining demand, ruinously low prices resulted. Several other circumstances multiplied the farmers' woes. High protective tariffs on industrial products forced them to pay artificially high prices for the manufactured articles they consumed and the industrial supplies they used in production. The burden of increasing taxation fell heavily upon the farmers, because the basis of the local tax system is the general property tax, which is levied almost entirely upon land. Finally, the weight of heavy mortgages also pressed unbearably upon many farmers. This was particularly true of debts contracted during the

wartime period of high prices and inflated land values. In 1933, foreclosures increased rapidly and bankruptcies were frequent. Conditions became so intolerable that foreclosure sales in many western states were nullified by mobs of neighboring farmers. It became evident that additional government assistance was required to relieve the agricultural situation.

GOVERNMENT AID TO AGRICULTURE

Government aid to the farmer has assumed many different forms, ranging from the giving of advice to the fixing of price. In general there have been two periods of rapid development of government action in behalf of agriculture. The first came during the years of discontent following the Civil War, and the second in the time of maladjustment after the First World War.

In the earlier period the assistance was not so direct as later, for it consisted primarily of educational aid and of protection against other economic groups. As far back as 1862, for example, the Morrill Act was passed by Congress, under which public lands were given to each state for the establishment and support of state agricultural colleges. These land-grant colleges, now located in every state, have been of prime importance in the spread of scientific agricultural methods. The Hatch Act of 1887 provided for experimental stations in each state, usually associated with the agricultural college, and they have accomplished much in research and investigation. The Department of Agriculture has also been of inestimable value to the farmers. Its many bureaus are concerned with every aspect of

agriculture and have brought tremendous assistance to the farmer in solving his problems. Many of these activities correspond to those privately undertaken by large concerns in manufacturing and other fields; their performance in agriculture by private enterprise would be virtually impossible because of the relatively small size of the individual farm.

During those decades, moreover, government protection of agricultural interests was clearly exemplified in the regulation of railroads in order to prevent discriminatory and excessive rates. Similar measures included currency legislation to limit the contraction of the currency and lighten the load of debt upon the farmers, and the anti-trust legislation, designed to prevent monopolies from charging exorbitant prices for manufactured products.

In the period between the two wars, however, government assistance to agriculture was rapidly extended in a number of important respects, including the development of farm credit facilities, the promotion of farm marketing agencies, and the adoption of measures to influence the prices and production of farm commodities. These latter activities have, without doubt, constituted the most spectacular departures from *laissez faire*.

The first major steps toward the improvement of rural credit facilities followed the establishment of the federal reserve system in 1913, with the creation of the federal farm loan banks and intermediate credit banks to extend long-term loans to farmers. These instrumentalities, however, were insufficient to cope with the in-

creasing burden of farm debt during the depression; therefore, the Farm Credit Act of 1933 was passed to meet the emergency by facilitating the refinancing of farm mortgages at lower rates of interest.

The measures to improve farm credit conditions were generally successful in attaining their immediate purposes; but the basic maladjustments between supply and demand for farm products, and the consequent low prices, were not remedied. Efforts have therefore been directed toward raising and stabilizing agricultural prices. Relatively ineffective tariff legislation sought to raise prices by protecting our farm products from foreign competition, but proved chiefly beneficial to industrial as contrasted with agricultural interests. The Agricultural Marketing Act of 1929, among other provisions, established a Federal Farm Board which sought in vain to stabilize the prices of the principal crops in the face of the economic collapse of 1929. The failure of this scheme involved a loss to the government of four hundred million dollars.

Farmers continued to demand the enactment of measures to establish agriculture on a basis of parity with industry. Assistance was granted to farmers in response to these demands, not merely because they possessed political strength, but also because of a growing belief that in agriculture unregulated competition under private enterprise does not function adequately as an equilibrating force, at least over relatively short periods of violent change. Farmers are so numerous, so scattered geographically, so diversified in their economic activities, and they exemplify so fully the problems of producers

with heavy fixed costs, that either individual or group adaptation to rapid changes is extremely difficult. Indeed, there is little the farmer can do in adjusting his production in any given year at least, once his crop is planted, regardless of how the price may fluctuate. Thus, market prices seemed to constitute an inadequate regulator of production, and government action seemed necessary to effectuate a more rapid adjustment.

The Emergency Farm Relief Act of 1933 created the Agricultural Adjustment Administration to effect a curtailment of production of specified basic commodities, presumably being produced in excessive quantities in relation to profitable marketing possibilities. Benefit payments, financed by means of taxes levied on the processing of the commodities concerned, were offered to co-operating farmers to insure their adherence to the programs. After achieving some measure of success in raising prices and meeting the immediate emergency, the law was declared unconstitutional early in 1936. Shortly thereafter the Soil Conservation and Domestic Allotment Act was enacted, which combined farm relief with the prevention of soil erosion. Under its terms, farmers who would plant soil-conserving, non-cash crops on land formerly devoted to certain overproduced staple products, would receive benefit payments. Production control under this act was ineffective and in 1938 Congress passed a broader program of control, still nominally for the purpose of soil conservation. Under this Agriculture Adjustment Act of 1938 acreage allotments were made for certain basic crops. Acceptance of these allotments was voluntary on the part of the farm-

ers, with benefit payments going only to participants. To ensure, however, that non-participants would not reap the benefits of the reductions, a system of marketing allotments was devised. Under this system, if two thirds of the producers vote to accept marketing allotments, the other producers of that crop must comply.

During the Second World War, agricultural production expanded one third although, because of technological improvements, the total number of persons engaged in agriculture declined. The future of American agriculture after the postwar period of shortages is, of course, not clear, but it does seem from past experience that only with high levels of employment and consumption in this country, together with increased exports, can the American farmer remain prosperous.

C H A P T E R X V I I I

Transportation and Trade

THE developments that have occurred in manufacturing and agriculture would have been impossible without corresponding improvements in transportation and trade. In this chapter will be discussed the complex mechanism that modern economic society has developed for transporting goods and marketing them, and the instruments of regulation that society has devised to control the agencies of transportation.

TRANSPORTATION

RAIL TRANSPORTATION

Railroad Expansion. From 30,000 miles in 1860 the railroad mileage in the country has increased to over 225,000 miles at the present time. In recent years, however, efforts have been directed toward improving existing roads and their service, rather than toward extending

them. Electrification, the introduction of fast, air-conditioned passenger trains, and the inauguration of improved, door-to-door freight shipments are current tendencies.

The phenomenal increase in railroad construction after the Civil War was financed with both public and private funds. Local towns, counties, and states subscribed capital to build railroads, and frequently donated land or extended various privileges. Although the federal government would not purchase capital stock in the roads, it did make large grants of land between 1850 and 1871, discontinuing the practice in the latter year. Partly as a result of this public assistance, roads were rapidly constructed. Most of the capital, however, was furnished by private investors. A large portion of the surplus capital saved each year was invested in railroads, and eventually they became the most heavily capitalized industry in the country.

Railroad Abuses under Laissez Faire. Until the decade of the 1870's the general attitude of the public toward the railroads was to aid them in every way to expand, and not to subject them to government regulation. There was much building of roads in advance of needs and in anticipation of uncertain future earnings. Extravagance and waste accompanied this rapid overbuilding, and speculation, overcapitalization, and fraudulent stock manipulation were all too frequent. Under the *laissez-faire* philosophy of the time, competition was relied upon to safeguard the public and to protect the roads from each other. But it became increasingly apparent that in the railroad industry competition was not a satis-

factory regulative force. This was due to the very nature of the industry.

In some localities, where only one line existed, the railroad possessed a monopoly, and the public was forced to pay high rates. At other cities, where two or more lines entered, intense rivalry among the roads to secure all possible traffic resulted in much lower rates. Rebates in various forms were extended to large shippers to secure their business, and much unfairness resulted. A notorious instance was the arrangement entered into by the Standard Oil Company in 1885, whereby in return for its patronage it was charged only ten cents a barrel on its shipments between two points while its competitors paid thirty-five cents, and the railroad gave to the Standard twenty-five cents of the higher rate collected from the competing oil companies. On another occasion the rate of \$1.88 per hundred pounds from New York to Chicago was cut to fifteen cents. Unregulated competition thus created ruinous rivalry among the roads at competitive points.

The railroads soon began to take steps to protect themselves against such cutthroat competition. They made agreements to divide available traffic, and when that device met legal objections, actual consolidations were effected. These consolidations proceeded until practically the entire mileage of the country was combined into a dozen huge systems, which in turn were controlled by about fifty persons.

Government Regulation of Railroads. Contemporaneously with the attempts by the railroads to avoid the difficulties of excessive competition, efforts were made

by the public to prevent the evils of railroad monopolies. Regulation first appeared as a result of the granger movement in southern and western states, where farmers were particularly subject to high and discriminatory rates. State laws were enacted that fixed maximum rates, prohibited discrimination in rates, forbade the consolidation of competing lines, and established commissions to enforce the laws. At first the Supreme Court upheld such legislation, but in 1886 it reversed itself by ruling that, although states could control intrastate trade, only the federal government had the power to regulate interstate commerce.

As a result of this decision and of the relative ineffectiveness of control by the separate states, Congress in 1887 passed the Interstate Commerce Act. This law declared that all rates should be just and reasonable, and prohibited rate discriminations and all forms of pooling. The Interstate Commerce Commission was established to collect statistics, investigate alleged violations of the act, and render decisions enforceable only through the courts. During the next ten years, the Supreme Court rendered a series of opinions that emasculated the act of 1887, and the Commission became little more than a statistical agency. Public opinion, however, demanded that the railroads be regulated, and in a series of strengthening acts between 1903 and 1910 Congress restored to the Commission its old powers and bestowed upon it additional authority.

By the beginning of the First World War a strong policy and an effective procedure of government control over the railroads had been established. The theory un-

derlying the method of regulation was based upon the principle of maintaining competition among the roads wherever feasible. Pooling of traffic or equipment was prohibited, consolidations were frowned upon, and water competition was encouraged where possible. When the United States entered the war, such a strain was imposed upon our transportation system that the federal government had to commandeer the railroads of the country and operate them as a unit. From December 1917 to March 1920 the Federal Railroad Administration exercised complete operating control of the roads and even restricted, to some extent, the authority of the Interstate Commerce Commission.

In the Transportation Act of 1920, passed when the roads were returned to private operation, Congress adopted a new regulatory policy. The old principle of enforcing competition was modified; instead, the act attempted to secure the greater unity of action and wider co-operation among the roads that the war experience had demonstrated to be advantageous. In addition, the Interstate Commerce Commission was given many new powers over the roads, and was further authorized to protect their welfare by adjusting the general level of rates so that the carriers as a group might earn a fair annual return on the fair value of their property.

The depression of the early 1930's greatly reduced traffic, and the roads suffered heavy financial reverses. As a result, the Emergency Railway Act of 1933 was passed, which contained a new rule of rate making, further strengthened the power of the Commission, and also established the temporary office of Federal Co-

ordinator of Transportation. He was authorized to study the transportation problems of the country and to render a report containing recommendations for improving the efficiency of the roads.

Following this report and further study of the transportation problem, Congress passed the Transportation Act of 1940. This law extended the authority of the Interstate Commerce Commission over any combination among common carriers covered by the Interstate Commerce Act, broadened the control over motor and water carriers as well as railroads, and established a national transportation policy by which all forms of transport are to be regulated so as to develop the potentialities of each in the public interest.

During the Second World War the railroads of the country, by close co-ordination of their facilities and services under the supervision of the federal Office of Defense Transportation, were able to meet successfully the heavy military demands placed upon them. With their financial resources greatly improved by the large volume of wartime traffic, the railroads entered the post-war era in a relatively strong condition.

HIGHWAY TRANSPORTATION

The phenomenal development of the automobile industry has furnished the outstanding event in twentieth-century transportation. Though the first practical gasoline-driven motor vehicle was not produced until 1893 in this country, the automobile industry now occupies first place among all manufacturing industries. The effects of this motorization of highway transporta-

tion facilities have penetrated to every corner of our economy. Trucks have been used more and more for transporting goods, in long as well as short hauls, and have reduced considerably the amount of freight carried by railroads. Passenger cars and motor busses have also made great inroads into the passenger traffic of the railroads. The result has been a tremendous loss of railroad freight and passenger revenues; and the railroads for several years agitated for a law that would regulate interstate trucks and busses.

The railroads complained of the unfairness of being taxed to build highways that would be used by their competitors practically without restrictions. Railroad officials demanded that motor carriers be subjected to government control in order to safeguard the public as well as to protect the railroads from unfair competition. In response to these demands, Congress passed the Motor Carrier Act in 1935. The administration of this law was placed in the hands of the Interstate Commerce Commission, which was given powers that enable it to exercise practically the same control over motor transportation that it wields over the railroads.

WATER TRANSPORTATION

In general, transportation by inland waterways declined in importance as the railway system of the country expanded. Over half of the canals have been abandoned; but the Erie Canal has been improved and is in use as part of the New York State Canal System. There was a steady decline in traffic on navigable rivers until the First World War. Under the stimulus of war

needs and government assistance, however, a new impetus was given to river transport, and barges have appeared on many rivers. Traffic on the Great Lakes, consisting principally of coal, ore, and grain, has steadily increased.

The increasing importance of water-borne traffic led to the extension of federal control over water carriers by the Transportation Act of 1940. This law placed inland, intercoastal, and coastwise carriers, with some exemptions, under the jurisdiction of the Interstate Commerce Commission, which regulates them in much the same way as rail and motor carriers.

Ocean shipping under the American flag continued to decline throughout the latter half of the nineteenth century and until the First World War. The wartime demand for ships provided a tremendous stimulus to our shipbuilding industry, and at the conclusion of the war our seagoing merchant fleet was second only to Great Britain. Following the war our tonnage declined rather rapidly, despite the efforts of the United States Shipping Board and its successor, the United States Maritime Commission created by the Merchant Marine Act of 1936. At the beginning of the Second World War the United States had about 1400 seagoing merchant ships but, as a result of unprecedented wartime construction, the merchant fleet emerged from the war with over 5500 ships of 40 million gross tonnage, more than twice the size of the British merchant fleet, the second largest on the seas. Whether the United States Merchant Marine can retain its dominant position depends primarily on the volume of world trade, the ability to operate ships

efficiently at low competitive costs, and the regulation policies adopted by the federal government.

AIR TRANSPORTATION

Youngest of the transportation agencies, air carriers have a remarkable history of improvement and progress. First flown in 1903, the airplane was used successfully in the First World War, was employed in commercial operations beginning in the 1920's, and was a determining factor in winning the Second World War. Before that war, commercial aviation was a significant factor in mail traffic and was becoming of increasing importance in passenger traffic, but was of only minor significance in the transportation of express and freight. The amazing developments in aviation during the war presage a rapid growth of air transportation in the post-war years.

Air carriers were first regulated by the federal government under the Air Commerce Act of 1926, which provided for safety measures, the registration and licensing of aircraft and pilots, and the establishment of air-traffic rules. Additional control was exerted through the granting of air-mail contracts and under several laws enacted during the next ten years, but more complete regulation over air commerce was imposed by the Civil Aeronautics Act of 1938. This law created the Civil Aeronautics Board, which exercises control over air carriers with respect to safety, service, rates, and consolidations similar to the control by the Interstate Commerce Commission over rail, motor, and water carriers.

TRADE

COMMUNICATIONS

Of extreme importance both in the transportation of goods and in their distribution is a communication system enabling merchants to have full and timely market information. To meet this need for information, this country has developed a remarkable system for gathering news. Several thousand daily newspapers, having an average daily circulation of over forty million copies, supply financier, farmer, manufacturer, and merchant with spot news concerning economic conditions throughout the world.

Improvements in postal service have been effected constantly as transportation agencies have developed. Since the Civil War, rates have been lowered and many new services added. The invention and expansion of the telegraph, telephone, wireless telegraphy and, more recently, the radio and wireless telephone have placed the entire world within sound of the human voice.

The widening of the market area, whether local, national, or international, over which economic forces operate and goods are transported, causes market prices to be more and more representative of supply and demand conditions the world over. On the other hand, changes in the conditions of demand and supply have immediate repercussions throughout the market places of the world that are interconnected with transportation facilities, for price fluctuations in one market are

reflected at once in other markets. Political rumors and diplomatic incidents are recorded around the world, often disturbing the security and commodity markets. A drought in Argentina affects wheat prices in Chicago, while an election in Europe may depress security prices in New York.

Inasmuch as monopolies exist in most of the systems of communication in this country, the government has had to exercise control over them. This began in the first decade of the present century, and has been broadened and placed under the Federal Communications Commission, which was established in 1934 to regulate interstate and foreign transmission by telegraphy, telephone, cable, and radio.

DOMESTIC TRADE

Growth of Trade. With such adequate transportation and communication facilities as above described, American domestic trade has greatly increased. Freight valued at three and a half billion dollars moved in domestic trade in 1860, but in 1939 it amounted to over a hundred billion dollars. At the latter date the domestic trade of the country was about ten times as large as its foreign trade; in fact, it was greater than the total foreign trade of the entire world.

The most evident cause of this enormous growth of domestic trade has been the rapid development of the country resulting from the increase in population and expansion of production. Minute individual division of labor and extensive regional specialization stimulated trade, as did the large-scale concentration in the produc-

tion of various basic commodities and in the fabrication of manufactured articles. All of this development was aided greatly by the rapid improvement in the financial and credit facilities of the country.

Marketing Methods. As large-scale production for a broader market became more widespread during the latter part of the last century, the gap between the producer and consumer was widened considerably, and the efficient marketing of goods became of greater importance. In fact, during the last fifty years a radical transformation in methods of distribution has produced an almost completely new marketing structure.

At first, more highly specialized middlemen, such as brokers, jobbers, commission men, selling agents, purchasing agents, and resident buyers, appeared in the marketing of various types of products, especially agricultural commodities. They aided in distributing goods between the farmer or manufacturer and the wholesaler, or between the wholesaler and the retailer, so that the marketing channel frequently proceeded from producer to middleman to wholesaler to middleman to retailer to consumer. These functional middlemen aided in coordinating supply and demand more effectively; by specializing in the performance of particular functions they usually increased marketing efficiency. More orderly marketing was also furthered by the development of produce exchanges and commodity markets, where the impersonal forces of demand and supply could establish an open market price. Such a high degree of specialization by middlemen would have been impossible, of course, when the volume of trade was comparatively

small; but with the expansion of trading activity to such enormous proportions, such specialization became profitable and a more efficient marketing mechanism was thereby created.

The most striking changes in marketing methods were in the emergence of new types of retail institutions and the expansion of their size. As population became concentrated in cities, the distribution of goods on a large scale proved more economical. Goods were being produced in greater quantities, and buying in large lots justified discounts. Furthermore, the rapid growth in newspaper circulation and the developments in advertising facilitated mass selling and the quick turnover of goods at lower prices. Improvements in transportation made possible speedy delivery of large quantities of stock as well as more central shopping by customers. Consequently, in the latter part of the last century, department stores, chain stores, and mail-order houses appeared. They assembled great varieties and quantities of goods for the consumer's convenience, so that he could make his purchases quickly and economically. Recent decades have witnessed a remarkable growth of these large establishments, until at the present time they transact over a third of all retail business. With the consequent decline of the old general store, independent unit stores carrying specialized lines also became important, until now they make about sixty per cent of retail sales.

There has also been a decided trend in recent years toward shortening the channels of marketing manufactured goods. As a result of the mass production of stand-

ardized goods and the national advertising of branded commodities, many manufacturers are dispensing with wholesalers and are selling their products directly to retailers. In fact, an increasing number of commodities are being sold directly to the consumer by the manufacturer, through branch retail stores, by mail, or through door-to-door canvassing. Furthermore, most large retail concerns assume many of the functions formerly performed by various middlemen. Indeed, integration under one ownership has proceeded so far in some instances that large retailers even engage in manufacturing. Because of these developments, the former importance of the wholesaler has been reduced in certain lines, and many of them, along with other middlemen, have been eliminated.

As already indicated, fundamental changes have taken place in the methods of buying and selling. Retailers buy more frequently, retain a smaller stock on hand, and thus secure a rapid turnover of goods, making possible a larger profit on the capital invested. In selling to the public, a one-price policy to all customers has replaced the older method of higgling, and as the consumer depends upon the retailer to assemble goods he desires, the retailer must be even more jealous of his reputation than hitherto in selling unbranded products. The maintenance of the quality of branded commodities, however, is the responsibility of the manufacturer or packer.

The pressure of competitive selling in recent decades has made it necessary for manufacturers to create demand for a specific product. Consequently, branding

has become widespread, and national advertising is essential to successful distribution. The resulting struggle among manufacturers to catch the public's favor has raised the costs of selling and increased the burden on the retailer, who must carry a greater variety of products and brands. In addition, the expansion of the market area necessitates a more complicated and expensive marketing mechanism. Moreover, the rapid changes in fashions increase the risk of style obsolescence, and the greater emphasis on service to the customer further enhances costs. One of the services that has greatly expanded in recent years to facilitate consumer buying has been easier credit facilities through installment buying and the use of finance companies. Because of these and other factors, the costs of marketing have been rising in recent years to such an extent as to offset many of the economies resulting from more efficient production. In other words, the economies of more efficient methods of production, instead of causing lower prices, are being nullified to some extent by the rising costs of distribution.

FOREIGN TRADE

Expansion. The foreign commerce of the United States, likewise, has grown tremendously during the past seventy-five years. In 1860 the United States ranked fourth among the nations of the world in the size of its foreign trade. That trade, which amounted to about 700 million dollars, was twenty per cent of our domestic trade. By 1944 the total value was more than 18 billion dollars, and this country led all others in the volume of

foreign trade. Though it constitutes a small proportion of the value of our domestic trade, the foreign trade of the United States has an importance far greater than its amount would indicate. Much of our economic life would be at a standstill without foreign trade. For example, we export large quantities of such products as cotton, machinery, and metal goods. Imports include many necessities such as tea and coffee, and important raw materials for American industry, such as rubber and tin. The Second World War demonstrated to everyone the importance of foreign trade to our national economy.

There are a number of causes for this extraordinary expansion of American foreign trade. The fundamental explanation lies in the development of the agricultural and mineral resources of the country and the rapid growth of manufacturing. This was facilitated by the tremendous improvement in the means of transportation and communication, both internally and internationally. Cheap American products were in demand throughout the world, and an extensive market for many foreign commodities likewise existed in this country. Furthermore, since the end of the last century there has been an increased participation in foreign economic relations.

This interest has found expression particularly in what is frequently alluded to as "economic imperialism", the financial and economic penetration of so-called backward countries. The accumulation of capital funds in this country impelled financiers to seek foreign investments in less developed regions where returns were

high. Simultaneously, American industrialists were searching for markets in which to sell products manufactured by mass-production methods, in which this country especially excelled. Foreign investment was aided greatly by the advance in financial methods, the development of credit facilities, and the establishment of American branch banks in foreign countries. This new interest in foreign markets was accelerated by American participation in two World Wars, during which the United States furnished enormous quantities of food products and war supplies to allied nations.

Finally, through all of our history the federal government has extended various aids to foreign trade, not merely through improving harbors and safeguarding navigation, but also by making positive efforts to expand our foreign markets through the Department of Commerce and our consular service. Practically no attempts are made, however, to secure more products for our importers, an equally important necessity if we are to continue exporting, and even more essential if we are to raise our standard of living. Despite the many aids, the federal government, on the other hand, has continually restricted foreign commerce by pursuing a policy of high protective tariffs.

Changes in Foreign Trade. Since the Civil War the character of our external trade has undergone many changes. The rapid industrialization of the country has been reflected in our exports, which have shifted from agricultural products, principally foodstuffs and crude raw materials, to finished manufactured commodities and semi-manufactures for use in further production.

Principal exports in 1944 were cotton, machinery, petroleum, iron and steel products, and automobiles. During the twentieth century exports to Europe have been declining, and the United States is selling more goods in North and South America and Asia. Canada has supplanted England as our best customer.

As this country developed industrially, there was a shift in imports from finished manufactured goods to crude materials for use in manufacturing, such as rubber, wool, hides, silk, and paper. The importation of large quantities of tropical foodstuffs as coffee, sugar, fruits, tea, and spices continued. These two types of products came largely from American and Asiatic countries, and an important phase of our policy of economic imperialism was the acquisition of greater control over the sources of such raw materials.

Until about 1875 the annual imports of goods into this country usually exceeded our exports, as foreign investors were lending capital to Americans, who used the funds to purchase needed products abroad. But since that time, exports of goods have surpassed imports almost every year, as interest payments have been made and loans from foreigners repaid with funds realized from selling American products abroad. It is thus seen that the export of goods is the principal way to repay a foreign debt or to invest capital abroad.

The huge loans made to our allies during the First World War caused us to shift from the status of a net debtor nation to that of a net creditor nation. This meant that other countries would have to pay interest and retirement charges in large amounts to American in-

vestors. In the long run, they could do this only by sending annually to this country goods valued at over a billion dollars in excess of American exports. This change to a position as a leading creditor nation necessitates a willingness by Americans to accept imports, for an excess of merchandise imports over exports is essential if foreigners are to be enabled to sell goods here to obtain funds with which to pay interest on American investments abroad. It is no mere coincidence that billions of dollars of foreign loans, both public and private, were defaulted or repudiated during the same period that the tariff barriers of the United States were raised. Because of this situation, as a creditor nation we are experiencing greater difficulty in marketing our agricultural and industrial exports.

During the Second World War, instead of making loans to her allies, the United States under lend-lease agreements provided war supplies and equipment valued at many billions of dollars. The virtual cancellation of these agreements at the end of the war prevented further postwar maladjustments in the foreign trade relations of this country.

Tariffs. One of the first laws passed by the Congress of the United States, in 1791, abolished *laissez faire* with respect to foreign trade. Tariffs were placed upon certain commodities to protect the manufacturers of those commodities from foreign competition. During the first twenty-five years of our history, however, import duties were primarily for revenue purposes. From 1816 to the Civil War the tariff became definitely a protective device, as the so-called "American System" gained many

followers, especially among the new manufacturing classes of the Middle Atlantic states. Nevertheless, customs duties were still the principal source of federal income, and several changes in rates were made because of excessive or deficient revenues. When the Civil War increased the need for funds, taxes were levied on domestic products, and duties were raised on imports to offset the higher domestic prices. At the conclusion of the war, the internal taxes were repealed, in large measure, but import duties remained high and furnished protection to American manufacturers. Since that time, high protection has been the permanent commercial policy of the country, and duties for revenue have played a minor role in tariff legislation.

At the conclusion of the First World War, the worldwide increase in nationalism created an opportunity for industrialists to clamor for even higher protection against foreign products, especially by manufacturers of the so-called "war babies", such as chemicals and dyes. The industrialists were joined by many farmers, who held the mistaken belief that protective tariffs on farm products would solve the depression in agriculture. However, as the crops that were most depressed were exported, and thus were not subject to foreign competition in the home market, a tariff on such products would not raise their domestic prices.

Between the two world wars the United States was a leading participant in the reversion to nationalism that swept the world and which was accentuated by the serious depression of the 1930's. Through tariffs, quotas, embargoes, and foreign exchange manipulations, most

countries have restricted trade in an attempt either to secure greater self-sufficiency for military purposes or to achieve economic recovery through raising domestic prices by limiting supplies of goods. This movement ran exactly counter to modern developments in world trade and transportation, which made the world more of an economic unit with a high degree of geographical specialization based on international trade.

The restriction of this trade created maladjustments throughout the world, and injured particularly the United States, both because of its status as a large creditor and its dominant position in foreign trade. In an attempt to break the impasse, this country in the 1930's adopted a policy of negotiating reciprocal trade agreements with other nations, in the expectation of improving economic conditions through increasing the international flow of goods.

All foreign trade was again disrupted during the Second World War. At its conclusion, however, the United States adopted a policy of stimulating greater freedom of trade throughout the world. Because of this country's predominant position in world affairs, and in view of the improvement in international relations hoped for from the establishment of the United Nations, there appeared to be a more favorable outlook for fewer trade barriers with a larger volume of trade among nations.

SUMMARY

The period since the Civil War has been featured by rapid expansion and fundamental improvements in the

transportation and marketing of goods. A network of railroads has been constructed throughout the country, and the revolution in highway and airway transportation has caused fundamental economic repercussions. Marketing institutions have undergone radical changes as retailing has become a large-scale enterprise and methods of selling have been transformed to meet the needs of present-day economic conditions.

Such expansion and improvements in transportation and trade have greatly increased the productivity of the country through facilitating the development of its economic resources. As a result of the efficient, cheap, and rapid facilities of transport, the broad areas of the United States have been combined into an effective productive unit. With the expansion of markets, the benefits of regional specialization and individual division of labor can be fully realized. Supplies of goods flow regularly from places of plenty to places of relative scarcity, thus increasing their value to the producer and their usefulness to the consumer. The reduction in the costs of food and manufactured products, resulting from lower transportation charges and the benefits of specialization, has raised the standard of living of a rapidly increasing population.

As it became evident that unregulated competition between railroads led to widespread social evils, government regulation was imposed to protect both the public and the investors in railroad securities. Eventually, similar legislation was extended to other agencies of transportation and communication until today a broad

program of social control is in operation. Marketing institutions, on the other hand, have developed under competitive conditions without creating serious social problems, and thus have been subjected only slightly to public control.

C H A P T E R X I X

Finance

THE complex trading interrelationships arising in connection with the production and marketing of products on a large scale have profoundly affected the development of credit and credit institutions during the period since the Industrial Revolution. The system of credit institutions that has evolved parallels the integrated pattern of trading relationships. Institutions for short-term financing, notably commercial banks, have expanded their functions to accommodate the growth of consumer buying and the increasing requirements of retail stores, wholesalers, and manufacturers. At the same time, institutions for long-term financing, such as investment banks, have developed methods to facilitate the sale and distribution of stocks and bonds in an era characterized by the corporate form of enterprise. So predominant is the use of credit in trade that the modern economic system is generally called a "credit economy", and credit has come to be closely interwoven with the monetary mechanism.

Because of the strategic position that commercial banks occupy as credit intermediaries, it is generally considered that they are sufficiently endowed with public interest to necessitate regulation and control by the government. Consequently, as their importance has increased, more social control has been exercised, until the highly individualistic "free banking" of the early nineteenth century has been superseded by the detailed regulation of the present time. This increased regulation has produced a constant trend toward greater co-ordination of banking into a centralized system.

Thus, the two most conspicuous features in finance during the modern period are the development of an integrated system of banking and credit institutions and the centralization of control of the banking and credit system.

THE BANKING AND CREDIT SYSTEM

The contemporary financial system is composed of institutions that perform services connected with consumers' credit, commercial credit, bank credit, and investment credit. All four types are related, directly or indirectly, to each other. Merchants are able to extend consumer credit to their customers largely because they, in turn, can buy on commercial credit from wholesalers, or can borrow from their bank in order to buy goods from wholesalers or manufacturers. These mutual interrelationships indicate that the credit system resembles somewhat "the house that Jack built." Thus, the mer-

chant extends credit to the consumer, the middleman extends credit to the merchant, the manufacturer extends credit to the middleman, and finally the bank may extend credit to any one of them. Chiefly, however, the bank's extension of credit is to the merchants and middlemen. The whole structure, so far as short-term credit is concerned, tends to be dependent in final analysis on the ability and willingness of the bank to extend credit.

CONSUMERS' CREDIT

Consumers' credit is extended when an individual consumer receives merchandise or services, or funds with which to make such purchases, in exchange for his promise to pay at some future date. This type of credit is a very old practice, possibly dating from the time when a Roman nobleman contracted a bill with his tailor. In recent decades, there has been such an expansion of consumers' credit that it has become an extremely important part of the modern credit system.

The most common means by which consumers receive credit is the charge account, whereby goods are purchased on open-book account, which will be settled at periodic intervals. In addition, many commodities, particularly furniture and automobiles, are sold to consumers on the installment plan. Often the installment sale is merely recorded on the books of the seller; though for many products, such as automobiles, formal records of debt are made. These records are usually a series of promissory notes due on various dates. Installment selling likewise becomes dependent upon the banks, for the

sellers commonly use as security for bank loans these promissory notes of their customers buying on installment.

Personal Loans. The consumer has always had difficulty in obtaining funds to meet extraordinary and emergency expenses that must be paid in cash. Pawnshops long satisfied this requirement, and still do to some extent; but borrowing from such places requires the deposit of perhaps some valuable possession as a guarantee that the loan will be repaid. If the individual has nothing to pledge he may fall into the hands of a loan shark, who will advance small sums of money at very high rates of interest — sometimes as high as a hundred per cent a week.

In recent years, more wholesome types of institutions have developed to meet consumers' needs for emergency loans. Loans to consumers, either in exchange for a personal note or for a pledge upon property that the consumer still retains in his possession, are made by small-loan companies, sometimes called personal loan companies, or industrial banks. Naturally, the cost of making small loans is a much higher percentage of each loan than when the amounts are larger. For this reason the interest rate charged is high; but in comparison with the outrageous interest of loan sharks and pawnshops, the small-loan company's charge is reasonable, and probably justified by the costs of conducting such a business.

In addition to industrial banks, which are private profit-seeking enterprises, there has also been a widespread development of mutual associations called cooperative credit unions. As a method for meeting

consumer needs for personal loans at low cost, this is a promising development, because, as all members are well known to each other, heavy investigation charges are thus eliminated from the cost.

COMMERCIAL CREDIT

Commercial credit serves merchants, middlemen, and manufacturers in a way similar to that in which consumers' credit serves consumers. Commercial credit, ordinarily extended for a short term, is used to provide business concerns with working capital, or circulating capital, in contrast with investment credit which provides permanent or fixed capital.

Instruments of Commercial Credit. Accompanying the remarkable expansion in trade and manufacturing activities subsequent to the Industrial Revolution, there has been a great increase in the use of commercial credit, principally through three types of instruments: open accounts, promissory notes, and bills of exchange.

When a merchant or a manufacturer wishes to purchase a stock of goods or raw materials he may arrange to pay at the expiration of thirty, sixty, or ninety days. A thorough investigation of the buyer's ability and willingness to pay after the contracted time has elapsed is usually made by the seller before open-account book credit is granted. Such investigations are now carried on by specialized credit agencies that base their judgment both on the experience of others and upon a careful independent analysis of the borrower's financial standing. The open-book charge account ordinarily involves no written promise to pay.

If a seller of goods desires some formal evidence of the transaction, he requires either the use of a promissory note or the type of bill of exchange known as an acceptance. A promissory note is the buyer's written promise to pay the seller the specified sum of money at some definite future date.

Often when an order of goods is shipped, a bill of exchange or draft upon the buyer accompanies it. The draft orders the buyer to pay to the seller or his bank, at some fixed date and place, the amount of the transaction. Before the merchandise is delivered, the prospective purchaser must "accept" the draft by writing "accepted" over the face of the draft and signing his name, thereby indicating that he promises to pay it; in this way the buyer makes the draft his own obligation to pay at the time specified. In many instances the buyer will arrange for his bank to accept the draft for him; the resulting credit instrument is called a banker's acceptance, and usually possesses a higher credit rating than does the ordinary trade acceptance. While trade acceptances were widely used in the nineteenth century, in this country the development of the use of bankers' acceptances is now more important.

Thus, by the open-book account, by the promissory note, and by the accepted bill of exchange, the sellers of commodities ordinarily advance credit to their customers. Moreover, it has become a common practice for the sellers, in turn, to use as security for bank loans the promissory notes or other credit instruments evidencing their customers' indebtedness to them, including their open-book accounts. When such a loan is obtained from

a bank, the borrower customarily receives in exchange a credit, or deposit in the bank, against which he can draw checks. Expansion of this type of activity by the banks has been a prominent feature of the history of economic development since the Civil War. This method of financing consumption as well as production has led to a great increase in the use of bank credit as money.

BANK CREDIT

Expansion of Demand Deposits. For over a hundred years before 1800, banks, when making loans to customers, issued banknotes to the borrower. A banknote is a bank's promise to pay cash on demand, and is, therefore, an instrument of credit or debt. During the first half of the nineteenth century in America, and even earlier in England, some borrowers from banks, instead of requesting banknotes, were willing to accept a credit on the deposit-account books of the bank. They then had the privilege of drawing upon the deposit by writing a check, payable to whoever would accept it in payment of a debt.¹ The receiver could take the check to the bank and cash it or credit it to his own deposit account if he possessed one. This practice of accepting a deposit credit when borrowing from a bank was rather common in the larger cities during the earlier part of the nineteenth century, but in the latter half of the century the utilization of the method became widespread.

When after 1866 state banks could no longer issue

¹ As noted in previous chapters, checks had been used for several hundred years to transfer deposit credits from one account to another, but their rise to predominance came during the modern era.

banknotes, they turned to the checking system as an easy and profitable way to extend loans. It proved so successful that the national banks also preferred it to the bank-note method, which became of less relative importance. In 1865, there were outstanding nearly 300 million dollars of banknotes, while total deposits amounted to about 450 million dollars. By 1890, notes had declined to less than 200 million, but total deposits had increased to about 2,500 million dollars. On December 31, 1936, there were approximately 4,584 million dollars in banknotes outstanding, and demand deposits alone totaled 25,100 million dollars. By March 31, 1946, approximately 24,000 million dollars in banknotes were outstanding and demand deposits were about 105,000 million dollars.² Over ninety per cent of the aggregate value of all payments are now made by check.

One of the most significant aspects of this deposit-account method of lending by banks is that private debts are thereby used as the principal form of money; for the loans that banks make to customers become demand deposits in the bank, and the borrowing customers, as well as other depositors, use them for making monetary payments.

Bank Reserves. As pointed out in Chapter XIII, it was believed during the era of competitive banking that the extent to which banks could thus extend credit would be automatically limited by the ratio of their liabilities to specie reserves, and that competition would compel

² Data for demand deposits alone are not available for the earlier dates. On March 31, 1946, savings accounts in commercial banks aggregated about 30,000 million dollars. *Federal Reserve Bulletin*, March 1937, pp. 177, 237, and May 1946, pp. 505-506.

them to keep in their vaults a sufficient amount of cash to meet demands for it.³ Experience during the era of wildcat banking demonstrated, however, that few of the state banks voluntarily maintained adequate cash reserves; and the first state laws compelling banks to carry such reserves appeared about the middle of the nineteenth century.⁴ The requirement of specie reserves for national banks was an important feature of the National Banking Act of 1863; and eventually most of the states also enacted such requirements. Upon the establishment of the federal reserve system, reserves were reduced and made more efficient in their operation.

The requirement of bank reserves is a method of limiting the extent to which banks may expand their deposits through their lending operations; and government control over bank reserves is one of the means by which greater centralization of the credit system has been attained in recent years.

Development of the Clearinghouse. As bank deposits came to be used as money, the efficient clearance of checks among banks became of great importance. In a city with several banks this clearing of checks is organized and conducted through the medium of a clearinghouse, an organization through which the banks settle claims against one another as the result of checks drawn upon them and deposited in other banks. The general technique of offsetting claims, and thus economizing the use of cash, had its origin in the medieval bourses,

³ See above, p. 246.

⁴ Louisiana, in 1842, was the first state to require definite specie reserves against liabilities to the public. Indiana passed such a law in 1852 and Massachusetts in 1858.

but the first clearinghouse among banks was established in London in 1775. It resulted from the daily meeting of bank runners at one place to exchange their items on each other's banks. In America the first clearinghouse association was formed in 1853 in New York, where, as a result of the increase in volume of check transactions, it became feasible to organize a specialized agency to perform the function. The rapid expansion of demand deposits after the middle of the nineteenth century caused such associations to be established in many cities, until several hundred exist today.

The magnitude of this clearing task may be appreciated from the fact that the total value of checks cleared in the 101 leading cities of the country in 1944 was 700 billion dollars compared with 407 billion dollars in 1936, and 37 billion in 1885. These enormous transactions are made possible by the efficient clearing system that has developed in this country. Despite the effective method of clearing checks within a city through clearinghouse associations, the clearance of checks among cities was, before the passage of the Federal Reserve Act in 1913, an intricate and time-consuming process. Since that time all member banks and most non-member banks clear their out-of-town checks (checks deposited with them that are drawn on out-of-town banks) through the federal reserve bank of the district.⁵

National Banknotes. Banknotes are another form of bank credit. As already explained in Chapter XIII, the National Banking Act of 1863, in an attempt to give the country a uniform currency, provided for national

⁵ See below, pp. 391-392.

banknotes to displace the notes of state banks. As these national banknotes were secured by long-term federal government bonds, they represented a method by which the public debt can be used indirectly as a circulating medium. Therefore, the less the government borrowed, the fewer the notes that might be issued; this proved to be a poor type of money, for the intensity of government credit requirements is ordinarily no criterion of the need for currency on the part of the public. Moreover, during the period from the Civil War until the First World War, when the country's currency needs were rapidly growing, the total amount of the federal public debt gradually declined.

National banknotes continued to be issued until 1935, when the Treasury announced that \$642,000,000 of the gold profit resulting from the devaluation of the dollar would be employed to retire all the government bonds enjoying the circulation privilege. This meant the eventual retirement of all outstanding national banknotes, since they are not permitted to be issued against the federal government bonds henceforth outstanding.

Federal Reserve Notes. The advent of the federal reserve system, which will be described later in this chapter, introduced a new kind of banknote called "federal reserve notes." These originally represented a type of banknote with the elastic qualities of the general-asset banknotes of the two early United States Banks, and illustrated an application of the "banking principle" of note issue, whereby currency contracts and expands with business needs. As a result of depression and war-time legislation, federal reserve notes can also be secured

by government bonds. They now comprise the most important element in the country's stock of currency in circulation, constituting over 24 billion out of a total of 28 billion dollars in currency outstanding. As already pointed out, however, the amount of currency in use in the United States is small compared to the amount of bank credit in the form of demand deposits from which payments are made by check.

LONG-TERM CREDIT

The period since the Industrial Revolution has witnessed the development of specialized institutions through which business firms borrow, for a long term, funds with which to start business or to increase their capital equipment. Stocks and bonds, issued by a corporation in exchange for capital funds, are negotiable, for they can be freely passed from hand to hand for a consideration.

Investment Banking. One of the most important trends in finance during recent history has been the rise of investment banking as an intermediary in the long-term credit market. An investment bank purchases long-term securities from a borrower (a corporation or government) and sells to lenders (investors or institutions); it is a merchandiser of securities. After the Industrial Revolution the investment of capital funds increased, but at first in both England and America most borrowing was done by governments and transportation agencies (turnpikes, canals, and railroads); the early factories were financed largely by the owners with little recourse to borrowing, as there was little need

for large-scale borrowing to obtain the comparatively small amount of capital required.

The spread of the corporate form of business made security issues more common, and necessitated specialized middlemen to sell the offerings. This need was accentuated by the increase in the importance of foreign capital, which could be loaned only through an agent. Security houses emerged usually as a side line of some other related business, and developed rapidly at the middle of the nineteenth century.

Financial operations incident to the conduct of the Civil War stimulated the growth of investment banking, and after that war the heavy flotation of railroad bonds placed the institution on a firm basis. Huge issues of corporate securities during the combination movement at the end of the century produced the modern investment banking houses, most of which are private banking firms.

Today, corporations wishing to borrow, or to float new issues of stock, may go to an investment bank and arrange with it to sell the bonds or stocks to investors and to deliver the proceeds to the corporations. As the reputation of the investment bank depends upon the experience that investors have had with the issues sponsored by that house, the credit standing of borrowing corporations is closely scrutinized. To spread the risk involved in large issues, an investment bank often will invite other bankers to underwrite or guarantee the sale of the issue, or to assist in the distribution and sale of the securities. This temporary combination of investment bankers is called an underwriting syndicate.

Sources of Investment Funds. The largest customers to whom investment bankers sell their securities are institutions that accumulate the savings of individuals throughout the country. Such institutions have enjoyed remarkable growth in the United States since the middle of the nineteenth century. Among them, savings banks serve as agencies to gather together the funds of small investors and to invest those funds in long-term instruments of debt, both public and private. The individual, though thrifty, may not possess the technical knowledge to invest his funds, or at least could not with his small savings secure a sufficient diversification in his investment. Consequently, he deposits his savings with a bank, which performs the investment for him. The sums of each individual might count for very little in providing needed funds for the business world, but the aggregate funds of small investors compose a very large total.

The various types of insurance companies also assemble and disburse a large volume of investment funds. Tens of millions of people, running the entire range of income groups, pay their pennies or their dollars to life, fire, and casualty insurance companies, thus aggregating millions of dollars every year. For the protection of depositors and policyholders, state governments usually restrict the types of investments open to savings banks and life insurance companies.

Securities Exchanges. Investors often wish to convert some of their securities into cash to meet current obligations, or they may desire to shift their investment to other securities. This is an important feature of the

integrated pattern of the modern credit system, because it not only makes investors more willing to invest in securities but it also makes it possible to use securities as the basis for loans from the banks. The securities exchanges (or stock exchanges) have developed to meet this need by maintaining a continuous market for the purchase and sale of securities. The maintenance of such a market has aided considerably the large accumulation of capital in modern industry.

The mechanism for a security market began with informal gatherings of dealers in securities in New York before 1800, and from this nucleus the New York Stock Exchange developed, furnishing a permanent market place for the exchange of securities. The early trading was principally in government securities; later, with the appearance of turnpike and canal corporations, the market was broadened. After the middle of the century, railroads and industrial corporations supplied the majority of securities for trading. Today, stock exchanges are also located in various important financial centers in the country such as Boston, Philadelphia, and other large cities. Thousands of shares are bought and sold daily on the numerous exchanges throughout the country by dozens of brokerage houses as agents for their customers. The stock exchanges constitute the mechanism whereby the private ownership of modern corporate enterprise may be bought and sold.

Securities Exchange Act. Following the stock market collapse in the fall of 1929, a series of Congressional investigations revealed startling practices of brokers and dealers on the securities exchanges, who frequently con-

nived with officers and directors of corporations for the purpose of defrauding the investing public. As a result, the Securities Exchange Act was passed by the federal government in 1934 to regulate the securities exchanges. This act provided for a Securities and Exchange Commission to supervise all securities exchanges that deal in securities in interstate commerce, and to compel the officials of the exchanges to enforce rules designed to maintain a free and open market in securities.

CENTRALIZED CONTROL OF BANKING AND CREDIT

There are three ways in which centralization of control of banking and credit has developed in the United States since the Industrial Revolution: first, through the emergence of a central banking system; second, through the development of banking supervision by state and national governments; and, third, through the control exercised by the federal government over the monetary standard.

The tendency towards centralization of control over banking and credit had been apparent during an earlier period in England, manifesting itself in the merging of the competing banks of that country into a small number of great branch-banking systems and also in the concentration of control over the credit market in the Bank of England. In the United States, however, this method of securing centralization of control was effectively frustrated by the existence of the numerous

separate states, jealously guarding their sovereign rights to have state banks, and by the public antipathy that existed against centralized banking power as exemplified by the successful opposition to the First and Second United States Banks.⁶ In England, a highly centralized and controlled banking and credit system thus developed through the autonomous action of privately owned banks; until recently even the central bank itself was a private institution rather than a government institution. In the United States, after much delay, centralization and control finally originated through government intervention rather than through action on the part of the banking system itself.

CENTRAL BANKING

Needs for Centralization. Since the passage of the National Banking Act of 1863 a "dual" banking system has been in operation in this country, one part of which has been chartered and supervised by the national government and the other by the various states. Deprived of the note-issue privilege in 1865 by a heavy tax, state banks at first declined greatly in number; but by the end of the century, because of more liberal state laws and the rapid development in the use of checkbook deposits, the number of state banks exceeded national banks, and by 1930 comprised about two thirds of the 24,000 banks in the country. As most state banks were small, however, they controlled only about one fourth of the total banking resources of the country.

During this period of exceptional growth and indus-

⁶ See above, pp. 255-257.

trial development it became increasingly apparent, particularly by the beginning of the twentieth century, that the banking facilities were inadequate and defective. Under this decentralized system, reserves were scattered among thousands of independent banks throughout the country. The resulting immobility of funds was especially calamitous in times of crisis, when the banks naturally tended to "scramble" for the existing supply of cash. Though urban industrial communities and trading centers had banking facilities, rural districts were frequently without them. Furthermore, as national banknotes were backed by bonds, and the tax on state banknotes was prohibitive, the volume of paper currency fluctuated according to the quantity and price of government bonds rather than according to the needs of business. Inelasticity of credit also resulted from the rigid reserve requirements of the National Banking Act and similar requirements in the banking laws of the various states. Finally, the relations between the federal Treasury and the national banks were unsatisfactory, in that the uncertain deposits and withdrawal of federal funds from the national bank depositories caused irregular and wide fluctuations in the reserves of the banks. Because of these serious defects and additional minor weaknesses, there was a growing agitation for bank reform.

Though the Currency Act of 1900 effected a few minor improvements in the banking system, difficulties continued, especially after the panic of 1907, and the National Monetary Commission, appointed in 1908 to investigate the situation, made many recommendations

for reforming the system. As a result of the Commission's report and of much general discussion, the Federal Reserve Act was passed in 1913.

Federal Reserve System. Under the Federal Reserve Act, twelve federal reserve banks were established in various sections of the country and a central board was located in Washington.⁷ Federal reserve banks deal only with their member banks. Every national bank is compelled to be a member of the federal reserve bank of its district; state banks may join by submitting to specified regulations and meeting certain standards. The member banks of each district own the stock of the federal reserve bank and have a vote in the election of its board of directors. However, the federal reserve system is administered as a central banking system through the Board of Governors, the members of which are appointed by the President of the United States with the advice and consent of the Senate. In addition, the Board has important regulatory powers over the banking practices of both federal reserve banks and their member banks.

Under the federal reserve system, the reserves of all member banks are kept in the reserve banks, and funds can be shifted from one reserve bank to another in case of need. In this way the old defects of decentralization and territorial concentration of funds have been partially remedied. As every member bank and many non-member banks have deposits in the district federal reserve bank, the clearance of checks between cities

⁷ Its original name, "The Federal Reserve Board", has since been changed to "The Board of Governors of the Federal Reserve System."

within a district is accomplished with facility by means of debits and credits to their respective accounts in the federal reserve bank. Furthermore, the clearance of checks between districts is effected by means of debits and credits to the accounts of the respective federal reserve banks in a special interdistrict settlement account in Washington.

Mobilization of Credit. Acting as bankers' banks, the federal reserve system mobilizes credit in two ways. In the first place, the reserve strength of the banking system is centralized in the federal reserve banks by requiring all member banks to keep their reserves on deposit with the district federal reserve bank. But in addition, when a member bank has made so many loans that its reserve against deposits has reached the legal minimum, it may have recourse to the federal reserve bank in its district to increase its reserve. The federal reserve bank advances its credit to member banks on the basis of certain types of eligible and acceptable credit instruments. Thus, by borrowing from the federal reserve bank, member banks increase their reserves that are kept in the form of deposits in the reserve bank, and thereby become able to extend the desired credit, in turn, to their customers.

Furthermore, the federal reserve system exercises considerable control over the credit structure of the country. If too much credit is being extended, so that an inflationary rise in prices of commodities or stocks appears to threaten, the Board of Governors of the system may attempt to prevent the further expansion of credit. If, on the other hand, so little credit is being granted that business apparently is having difficulty in obtaining

needed funds, the reserve system may follow a policy that facilitates the extension of credit.

Fiscal Agency for the Government. Federal reserve banks are required to perform certain fiscal functions for the national government, connected with the sale and repayment of government bonds and the payment of interest thereon. In this capacity, the federal reserve banks proved of inestimable value in financing both world wars, and also in the refinancing of government bonds after the wars. When the sudden deflation of high prices took place in 1920 and 1921, the federal reserve system successfully met the financial strain, and it aided the readjustment to a lower level of prices with remarkably few bank failures. Later, it aided the federal government in extensive financial operations during the depression of the 1930's, and during the Second World War.

BANKING SUPERVISION

The second way in which control over the modern credit system has come to be more and more centralized is through banking supervision by state and national governments. Following the state laws that fixed minimum reserve requirements for state banks, the various states began, during the later half of the nineteenth century, to establish state commissions of banking and insurance to supervise the banks chartered by the states. It was the function of such commissions to see that state banks maintained the required reserves and that they complied with other banking standards set up by the state banking law. By the beginning of the pres-

ent century, some of the states had developed highly efficient organizations of bank examiners who periodically studied with great care the condition of each bank in the state. All national banks were subjected to similar scrutiny by a force of examiners under the jurisdiction of the United States Treasury Department. When the Federal Reserve Act was passed, it provided that member banks should be similarly responsible to the federal reserve bank and the Board for the quality of their banking assets. During recent years, this whole function of banking supervision has undergone a marked change towards greater centralization of authority in federal agencies, because of certain defects that survived after the creation of the federal reserve system.

Defects Continuing after the Federal Reserve Act. A movement to combine the various functions of banking within one institution led commercial banks, especially after the First World War, to enter the field of investment banking, usually through establishing security affiliates. This mixture of commercial and investment banking produced unfortunate results. For example, banks having such affiliates sometimes made loans to the affiliate, or to its customers, on questionable security because the affiliate had an interest in selling the particular security. It was disclosed that in some instances the affiliates unloaded unsalable securities on the bank, and that the affiliate dealt in the stock market to support the price of the bank's stock, in order to revive public confidence in the bank. During the security boom of the late 1920's, shady and even fraudulent practices were sometimes perpetrated, and particularly flagrant

abuses arose in connection with the sale of foreign bonds.

The lack of unification in the banking system proved to be another weakness, for although the banking regulations in some states are as strict as those for national banks, the laws of many states are so lenient as to permit very lax banking conditions. Competition between state and national authorities in liberalizing their banking regulations created an unsound situation.

The world-wide maladjustment following the First World War, accompanied by the protracted instability of agricultural conditions in the United States, imposed a strain upon the banking system. During the years between 1921 and 1929, there were 5,714 bank failures in the United States. Following the collapse in the securities markets in the fall of 1929, this epidemic of bank failures spread even to large city banks; and over five thousand more failures occurred during the three years beginning with 1930. By the beginning of 1933, despite attempts to aid the banks, the situation was worse. The public rapidly lost confidence in banks and attempted to convert deposits into currency for hoarding. In three months nearly two billion dollars were hoarded. Runs occurred on banks in virtually all sections of the country, and several states established bank holidays. On March 5 the President declared a nation-wide banking holiday until legislation could be enacted to meet the emergency. Thus again was attention focussed upon the problem of banking reform.

Banking Reform. The banking laws enacted between 1932 and 1935 accelerated certain trends that for several

decades were leading to a greater degree of centralized national control over the banking system of the country. Unification of control over the system has been furthered by concentrating broader powers in the hands of the Board of Governors of the federal reserve system, by permitting banks to establish branches throughout their state, and by admitting additional types of banks to membership in the federal reserve system. Commercial banks can no longer underwrite securities. Moreover, the power and responsibility to influence credit in the open market by the purchase and sale of securities were located more specifically in the jurisdiction of the Board of Governors, instead of being determined by the federal reserve banks. The Board now possesses the authority to restrict the use of credit for speculative purposes, which greatly increases its disciplinary power over banking practices and the credit market.

In addition, greater flexibility in member-bank reserves has been provided by allowing reserve banks to make loans to member banks on "any satisfactory security" as well as on commercial paper already eligible for rediscount at the reserve banks.⁸ This allows greater latitude in the event of an emergency. Finally, public confidence in bank deposits has been improved by the establishment of a permanent deposit insurance plan, through which each depositor is protected up to five thousand dollars of his deposits. The federal supervisory power imposed upon the banks through the Fed-

⁸ Rediscounting occurs when a federal reserve bank lends to a member bank by discounting again commercial paper that the member bank has already discounted for a customer. See above, pp. 378-379.

eral Deposit Insurance Corporation also greatly centralizes in federal agencies the supervision of the banks of the country.

THE MONETARY STANDARD

From the very beginning, the determination of the monetary standard has been a sovereign power of government, and, as a consequence, national governments have always exercised a measure of control over the system of exchange and credit. Under the regime of *laissez-faire* policy, however, this control consisted principally of establishing a monetary standard and then permitting the operation of economic forces to adjust the country's banking and credit structure to the standard. Since the First World War, the trend throughout the world has been away from a *laissez-faire* automatic standard towards the development of a managed standard. The standard money of a country is that which serves as the unit of value, and into which all other forms of money are convertible. To serve properly its primary function it should be as stable as possible. But since the Civil War, the career of the basic money of our system has been checkered.

Government Paper Currency Standard. It was stated in Chapter XIII that the law of 1834 made both silver and gold the standard money at a ratio of sixteen to one. At this ratio, silver was more valuable as bullion than as money, and there were no silver dollars in circulation from 1834 to 1861. When the Civil War began, therefore, the circulating medium of the country consisted of gold, subsidiary silver coins, and the notes of state

banks. The country was on a legal bimetallic standard.⁹ As the financial demands of the war were not completely met by taxation and borrowing, the federal government resorted to the issue of legal tender paper money, designated as United States notes. These were demand obligations of the federal government, and thus constituted an example of using the public debt as a circulating medium of exchange. In the first year of the Civil War, specie payments (conversion of currency into metal) were suspended, and the country passed from a legal bimetallic standard to a paper currency standard. United States notes (greenbacks) became the standard of value and were made legal tender by government authority.

About 450 million dollars of these notes were issued; and the excessive supply depreciated their value. In keeping with Gresham's Law, the greenbacks soon drove the more valuable gold and silver coins from circulation.¹⁰ The need for small denominations and fractional currency forced the people to use postage stamps for small payments. At the conclusion of the war, the policy was followed of gradually retiring the United States notes; but when the quantity outstanding had been reduced to about 350 million dollars, Congress stopped further retirement because of the belief that the policy was making the post-war readjustment to peacetime pursuits too deflationary. For a decade a bitter struggle occurred between creditor contractionists and debtor inflationists. The cry for further inflation by the farmers and the Greenback Party, however, was not

⁹ See above, pp. 259-261. ¹⁰ See above, p. 129.

heeded by the administration, and the greenbacks (and all other kinds of money) were made redeemable in gold on January 1, 1879. Renewed pressure from the agricultural regions of the country did succeed in retaining as a permanent part of our monetary system about 346 million dollars of the notes, which were continually reissued and are outstanding at the present time.

In preparation for the redemption date in 1879, the Treasury accumulated a gold reserve, amounting to about forty per cent of the volume of greenbacks outstanding, with which to redeem any notes presented; but because of an increase in the demand for money with the growth of the country, and the assurance of conversion, the value of the greenbacks rose to par before the redemption date, and very few were offered for redemption when the time arrived. Thus, during the period from the beginning of the Civil War until January 1, 1879, the country was on a paper currency standard as neither gold nor silver was in circulation, and the currency consisted principally of national banknotes and greenbacks, both irredeemable in gold or silver.

The Triumph of Gold. In the Coinage Act of 1873, Congress dropped standard silver dollars from the list of coins that might be made by the mint. The coinage of subsidiary silver coins, however, was continued according to the law of 1853, which made them fiduciary coins, with their value as money higher than the value of their bullion content. This demonetization of silver dollars, in conjunction with the resumption of gold payments in 1879, placed the United States on a *de facto* gold standard without an explicit proclamation to that

effect. Since January 1, 1879, with two brief exceptions, the country has been on a gold standard; although as a result of the uncertainty of the law, a long and bitter controversy over bimetallism continued during the remaining years of the nineteenth century.

After 1873 the world price of silver declined, and during the next twenty-five years the value of silver continued to decline until it became worth only thirty-five to one in terms of gold. The owners of silver mines raised insistent demands for the demonetization of silver at sixteen to one. This would have given them a permanent market at the mint for their product at a high price. They were joined in their campaign by the Greenback Party and other inflationists, principally farm debtors, who were suffering from the decline in the price level that was then occurring.

Partial success was achieved. In 1878 and again in 1890, Congress passed measures providing for the purchase of silver by the Treasury in large quantities. As a result of this policy, about half a billion dollars' worth of silver was purchased, most of which was coined. The new money had little effect upon the falling prices of the period, but as the rapid addition to the money supply was too large to be absorbed, gold, in accordance with Gresham's Law, began to be driven from circulation. The fear became prevalent that the government would not be able to maintain the currency on gold. A special session of Congress was called in 1893 and the silver-purchase law was repealed. The presidential campaign of 1896 was based on the issue of free and unlimited coinage of silver at a ratio of sixteen to one. The

decisive defeat of Bryan, who had declaimed in his campaign that we should not "crucify the nation on a cross of gold", meant the triumph of the gold standard.

It was not until 1900, however, that the hard-money forces could gather sufficient strength to enact a currency-reform measure. The Currency Act of 1900 definitely established the gold standard by providing that all forms of currency should be maintained at par with gold. All currency and all bank deposits were kept on a parity with the value of a gold dollar of 23.22 grains in the open market through free and unlimited coinage of gold and free convertibility of all currency and bank deposits into gold at that rate.

Rising prices during the next two decades caused a discontinuance of demands for inflation and a temporary cessation of currency difficulties. During and after the First World War, large imports of gold flowed into the United States until we possessed nearly half of the world's supply; this made money and credit conditions very easy. Our monetary stock of gold coin and bullion increased from a billion dollars in 1900 to over four billion dollars at the time of the devaluation of the dollar in 1934.

Devaluation of the Dollar. A new demand for monetary legislation arose after the rapid decline of prices during the depression following 1930 had created much hardship and unrest among debtor classes. As is usual in a period of depression, a great many people thought that prosperity could be restored through control of the currency. Moreover, it appeared that some action had to be taken to relieve the tremendous burden of debt

and to "reflate" prices to a higher level. Such sentiment was particularly strong among the agricultural classes. In addition, the owners of silver mines saw an opportunity to secure some preferential treatment. And, finally, President Roosevelt apparently possessed hopes of creating a system of managed currency by which the purchasing power of the dollar could be stabilized over long periods of time. The result was a series of important monetary experiments.

The presidential proclamation of March 5, 1933, not only closed all the banks of the country but also suspended redemption of the currency in gold. After the departure from the gold standard, the paper dollar began to depreciate in terms of gold. Within a few weeks additional executive orders forbade the hoarding of gold, required its surrender to the Treasury, and prohibited its export for any purpose.

In January 1934, the Gold Reserve Act was passed. This law required the transfer of all gold from the federal reserve banks to the federal Treasury, in exchange for gold certificates issued to the reserve banks. The act contained the proviso that the gold value of the dollar should be lowered and could be varied from fifty to sixty per cent of its former value if necessary to stabilize prices. Upon the passage of the Gold Reserve Act, the President announced a price of thirty-five dollars an ounce for gold, which devalued the dollar to 59.06 per cent of its previous gold value, and placed the country on a gold bullion standard. A gold profit of over two and a half billion dollars was thus obtained by the Treasury. The act further allowed the export and import of gold

bullion under license, though it could not be retained by a person; and gold bullion could also be secured from the Treasury by licensed users for industrial purposes. The high price of gold brought about by this law resulted in unprecedented gold imports which increased the American gold stock to a value of over 22 billion dollars by the end of 1941. These large gold imports provided the additional reserves used to finance the Second World War.

SUMMARY

American monetary developments since the Civil War evoke several significant conclusions. In the first place, the standard has been very unstable in value. Since 1860 the variations in the purchasing power of the dollar have been extreme, as is evident from the following figures, based on wholesale prices, with 1860 taken as the base of 100:

YEAR	1860	1865	1896	1920	1932	1941
PRICE LEVEL	100	216	76	247	106	143
PURCHASING POWER	100	46	131	40	94	70

A second noticeable fact has been the difficulty of maintaining the gold standard in time of war or economic stress. This has led, in the third place, to a distinct movement away from the old automatically operating gold standard toward a standard, either gold or paper, that is subject to a high degree of management by the federal government or by the central banking authority. This situation, especially during the years between the two world wars, resulted partially from the rapid growth of nationalism in a world in which, because of mercan-

tilistic ideas, gold was not allowed to flow freely among countries. Efforts were made to manage domestic price levels, either to stabilize prices or to attempt price control as a method of achieving economic recovery from the world-wide depression of the 'thirties. During the Second World War the international monetary situation was probably as disturbed as ever in the history of the modern world. The war, however, brought about proposals for international co-operative control of monetary systems. These proposals culminated in the Bretton Woods plan for an international monetary fund.

In the field of finance, as with other phases of modern economic society, the trend appears to be towards increasing government regulation and assistance. The sale and transfer of securities are regulated by a Securities and Exchange Commission; the activities of national banks are supervised by federal reserve officials, the Comptroller of the Currency, and investigators of the Federal Deposit Insurance Corporation; and money and credit operations are closely supervised by the federal government. Today, through a functioning central banking system, through extensive federal supervision over banks and the stock exchanges, and through an active control of the monetary standard by the federal government, the control of the country's credit system has become highly centralized.

C H A P T E R X X

Population and Labor

PREVIOUS chapters have described the remarkable changes in economic life that occurred during the nineteenth and twentieth centuries. The Industrial Revolution, the transformation of agriculture, and the great development of transportation and commerce have all been considered. A complete picture, however, requires a consideration of the human aspects of these far-reaching changes. It is thus necessary to analyze the effects of these changes on the lives of the people. Did the mass of the working population obtain what they considered to be their share from the increases in wealth that accompanied the economic revolution? Did the overturning of old customs, methods, and institutions of economic organization lead to any effort on the part of those affected by these changes to find new bases of social and economic interactions?

POPULATION

Probably the outstanding objective fact of this period, so far as human considerations are concerned, is the extraordinary expansion in population. The growth in the population of a country depends upon (1) the balance between emigration and immigration, and (2) the natural increase; that is, the difference between the number of births and the number of deaths.

GROWTH IN ENGLAND

In England for every year after 1831, there was an excess of emigration over immigration, but the natural growth was large enough not only to offset this difference, but also to provide for a large net increase in the total population. Population estimates for the eighteenth century indicate that the number of people in England and Wales increased between 1700 and 1750 from five millions to about six and a half millions. By the time of the first census (1801) the population was nearly nine millions. This spectacular growth continued throughout the nineteenth century, although after 1880 the rate of increase steadily declined. By 1911 England and Wales had slightly over thirty-six million inhabitants; thirty years later, in 1941, the number had increased to over forty-one millions.

This growth, in the main, was attributable to a declining death rate, rather than to a higher birth rate. Such a situation "is an unerring sign of advancing pros-

perity and improved sanitary conditions", says one authority.¹ Better living conditions, a higher quality of food at comparatively low prices, the advance of medical science (particularly the introduction of vaccination), and the decrease in infant mortality led to improvements in public health and to the prevention of disease. The fact that thirty-six million people could live fairly well in an area that less than two centuries before had with difficulty supported fewer than six million was a remarkable indication of the tremendous increase in national productivity accompanying the economic revolution. England was able to feed this population because the products of her factories could be sold in distant lands in exchange for food.

GROWTH IN THE UNITED STATES

Extent. Great as was the growth of the English population during the nineteenth century, it was far outstripped by the more spectacular increase in the United States. In this country about four million people in 1790 increased to over thirty million in 1860. Most of this growth was attributable to natural increase, for only in the latter part of the period did immigration play an important role. Pioneer conditions encouraged large families as a desirable source of additional hands for farm work or domestic manufacturing. Along with the increase of population occurred a shift in its geographic distribution. In 1790 the people were scattered along the Atlantic seaboard, almost entirely in rural areas, but by 1860 more than half of the population lived west of the

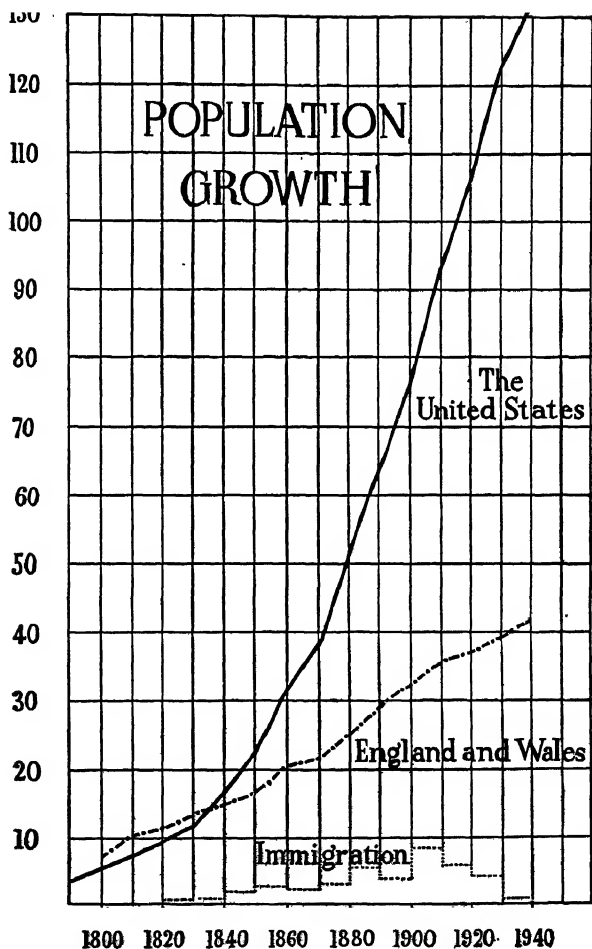
¹ Porter, G. R., *The Progress of the Nation* (1912), p. 9.

Allegheny Mountains. At the same time, there was also a movement to the cities. In 1780 there were only five towns with over eight thousand inhabitants, but by 1860 this number had increased to 141, and sixteen per cent of the total population was classified as urban.

In the eighty-year period following 1860 the population increased by about four hundred per cent, for by 1944 it amounted to over 138 million people. This growth resulted from both natural increase and immigration. As in England, the development of medical science had lengthened considerably the average number of years a man might expect to live. In addition, in the United States the annual number of births increased until 1924. After that time births per year decreased until the outbreak of the Second World War, when the birth rate started to increase again.

Immigration. The accompanying chart shows the increase in American population as compared with that of England and Wales, and indicates the part played by immigration in this country. Immigration into the United States, presented on the chart by decades, surprisingly accounted for a comparatively small part of the population increase until the second half of the century; the greatest inflow of immigrants occurred between 1880 and 1910. In the 1880's the population increased about 12.7 millions, while total immigration during that decade amounted to 5.2 millions; from 1900 to 1910 population increased by 16 millions and total immigration amounted to nearly 8.8 millions. The outbreak of the First World War in 1914 abruptly curtailed immigration and it has not been permitted to regain its pre-war

MILLIONS OF PEOPLE



Sources: — For the United States, figures taken from the *Statistical Abstract of the United States*. For England and Wales, figures taken from *The World Almanac*.

volume. Between 1924 and 1936 there was a rapid decline in immigration from a total of 706,896 to 36,329. After 1936 there again was a slight increase for the next three years to a total of 82,998 in 1939, but that trend did not continue.

Prior to 1890 the majority of immigrants came from countries of northern and western Europe, but between 1890 and 1925 there was a much larger influx from southern and eastern Europe. These foreigners came in large numbers, looking for a land of opportunity. Because labor was still relatively scarce in the United States, millions were able to find jobs yielding real wages higher than were obtainable in Europe. After 1880, the growth of large-scale industries such as steel was an important factor in drawing the unskilled labor from southern and eastern Europe. Most of these immigrants settled in urban areas of the North and East where they worked in the many new factories.

Such a migration not only benefited the new arrivals themselves but also the nation's employers, who were thus assured of a cheap labor supply. The effects upon workers already within the country were more dubious, for at times the immigrants flooded the labor markets, thus depressing wages. In addition, because the newcomers were often exploited in low wages, workers already in the country suffered what they thought to be unfair competition. Faced with such competition, organized labor initiated the movement for immigration control. They were supported by patriotic societies who feared that foreigners, particularly the newer immigrants from southern Europe, would despoil traditional

American institutions by introducing European ideas and customs. The pressure of these two groups gradually brought results. At first, in the 1880's, various types of undesirables were excluded, apparently with little idea of reducing the total quantity, but rather of raising the quality of those admitted. This same policy eventually was embodied in the literacy test in the act of 1917.

After the First World War the widespread agitation for restriction culminated in 1921 and 1924 with the passage of laws that established definite quotas for immigrants from European countries. The present quota for each country is based on the percentage of the descendants of that nationality included in the total population of the United States in 1920. During the depression of the 1930's, administrative authorities further limited the number of immigrant arrivals by interpreting strictly the provisions contained in immigration legislation prohibiting the admission of aliens likely to become public charges.

Recent Population Developments. Several tendencies may have considerable effects upon the composition of the future population of the United States. Probably most important is the noticeable decrease in the rate of population growth. The decrease in birth rates became greatly accelerated in the decade 1920-1930. Despite the slight increase during the period of the Second World War, it seems clear that if present tendencies continue, the population of the United States should become stationary within another generation or two and may even begin to decline. At that time there will be a much larger percentage of the population in the older age

groups, and a smaller proportion of children and young people.

Another important factor bearing on the status of the population is the existence of marked birth-rate differentials among various population groups. By dividing the population into broad social groups and comparing the birth rates of the various groups, it is found, in general, that those with high "cultural-intellectual levels" barely replace themselves, while those of a lower level are more than doing so. Such a development may have great social and political repercussions in the future.

LABOR

ENGLISH TRADE UNIONISM

An earlier chapter described the origins of the English trade-union movement in the journeymen's unions of the old established trades. The domestic system and the Industrial Revolution stimulated the development of the labor movement, because the interests of the employers and of the employees were more sharply differentiated than formerly. The employer, competing in a wider market with other employers, was constantly seeking to lower his costs of production; this created a pressure to reduce wages. The workers, on the other hand, were naturally interested in increasing their share of the income produced by the new industrial system.

The growth of labor unions in England, however, was delayed both by the restrictions of the common law against conspiracy and by a statute making combina-

tions for the purpose of raising wages illegal. Between 1825 and 1875 four laws were passed, which removed all traces of illegality from trade unions and their ordinary actions. During the nineteenth century, therefore, English trade unions grew rapidly, and gradually won from reluctant employers better working conditions and a degree of recognition of the desirability of collective bargaining. By 1900 many employers preferred to deal with strongly organized unions rather than with a "chaotic body of restless and unorganized labor."

During the present century, English labor organizations have continued to grow in power and strength. The accumulated wealth of the unions has become large, and certain new developments have made themselves felt. In addition to the older unions many unskilled workers such as dock hands, stokers, and women workers in various industries have been organized, and have thereby improved their working conditions. Most of the early organizations were craft unions, that is, unions in which the workers are organized according to their trade; but recently there has been a growth of industrial unionism, with the organization of workers by whole industries. Finally, the traditional political activities of English labor, through the medium of a special committee of the 'Trades' Union Congress, culminated in 1906 with the formation of the notably successful British Labour Party. In 1924 and 1929 this party, with the support of the liberals, was in control of the government, and in 1945 it took over the reigns of government with a large majority in Parliament.

DEVELOPMENT IN AMERICA

Origins. The forces leading to the development of an American labor movement are similar to those found in England. Trade unions first developed when an employer came between the worker and the customer, in other words when there was the development of a wage system, either as a result of increased local population or the expansion of foreign or distant domestic markets. With the expansion of markets the system grew rapidly and created a sharp line of division between the interests of the enterprisers and the employees. Therefore, the factory system cannot be said to have led to the first trade unions. In fact, unions appeared first in what may be called the old trades (that is, trades like shoemaking, tailoring, building, and tanning), when those industries began to produce for a general market and future demand. In some of those industries sharp competition between employers for the southern and western trade forced them to deal in more impersonal terms with their journeymen workers. This type of trade first appeared in the production of shoes in Philadelphia and other eastern towns, and it is not surprising, therefore, that one of the earliest labor unions was that of the Philadelphia shoemakers, or cordwainers, as they were called. As early as 1792 this group organized in an attempt to obtain better conditions for themselves.

The growth of early organizations was, however, checked by a series of legal prosecutions against the unions charging them with conspiracy. Between 1806 and 1815, in various cities of the East, there were six

separate trials of cordwainers for criminal conspiracy. The employers maintained that the action of the workers in combining to raise wages was against public interest, as it would drive producers to other cities, and cause higher costs of living for all. The union claimed that prosperity depended upon higher wages, and that labor combinations therefore were socially advantageous. As the employers were either entirely or partially successful the movement for labor organization received a severe setback.

Early Period of Growth. The period from 1833 to 1837 brought such a rise in prices that workers, apparently forgetting the conspiracy trials, once again attempted to organize. Such a period of prosperity ordinarily stimulates organization activities because wages rise more slowly than do other prices, and because the evident increases of profits encourage the wage earners to strive for better pay. Strikes were prevalent during those years. By that time, factories had begun to develop in the United States, and factory workers joined with the older trades in demanding a share in the new prosperity. Once again employers resorted to the courts in an attempt to suppress combination, but in eight trials only two convictions were secured. In 1842 a notable decision by the Supreme Court of Massachusetts declared that unions were legal; this marked an important step in the progress of workers' organizations.

Numerous developments in the labor movement came at this time. In an attempt to secure uniform action, craft unions within a city often formed city federations, called "trades' unions"—a term not to be

confused with trade unions, which means the union of a single trade or craft. The city federations had no power to call strikes, but they helped to raise funds, and, to arouse public sentiment in behalf of the local unions, they often wrote "letters to the editors" of local papers. The Newark City Federation sent a delegation with financial aid in 1836 to the striking Paterson textile workers. Likewise during these years, laborers began to realize that to raise wages and improve conditions they must organize over the entire competitive market. If they did not, a strike in one town would merely drive the industry to an unorganized locality. The solution of this problem was the formation of a national trade union uniting all the workers in a craft, and several such organizations were formed at this time. There was also a national federation of the several city federations; and many local trades' unions began the publication of newspapers.

The depression that began in 1837, however, brought ruin to this early development. Very little of the movement survived, for with thousands out of work, union membership declined, as workers, with no thought of their fellow craftsmen, scrambled for jobs offering any wage. Sporadic attempts at revival occurred during the next decade, but it was not until the last years of the 1850's that trade unionism once more became important. The temporary reversal following the panic of 1857 was not so serious as that which accompanied the depression of 1837. By the end of the Civil War labor was ready for new development; and since that time, although subsequent depressions have brought temporary declines in

membership, the labor movement has experienced uninterrupted progress.

Knights of Labor. The Knights of Labor, an organization formed in 1869, rose spectacularly to great importance and then descended almost as rapidly into oblivion. Its objects, as stated in its constitution, were "to bring within the folds of organization every department of productive industry, making knowledge a standpoint for action, and industrial and moral worth, not wealth, the true standard of national greatness." The program of this organization was a rare combination of idealism and realism. It was based upon the brotherhood of all labor, or what has come to be called "the one big union", a general labor organization. Both skilled and unskilled labor, and even employers, if they were also workers, were eligible for membership. The bargaining power of the skilled workers was to be used as a weapon to obtain concessions for all.

The Knights reached their greatest strength and influence in 1888, after which their decline was rapid. Because their first strikes had been successful, the power of the organization was feared and respected. A later series of unsuccessful strikes, however, materially reduced the strength of the organization and weakened the prestige of its officials. In addition, continual internal strife resulted from factional dissension over the place of the national trade union in the structure of the labor movement. Finally, with the growth of the American Federation of Labor, the Knights of Labor ceased to function as an active organization.

MODERN LABOR MOVEMENT

The American Federation of Labor. While the Knights of Labor was attempting to combine all workers for their common welfare, the national unions of various crafts, after their formation in the 1850's and 1860's, had been growing stronger and obtaining more power over the various local organizations. As previously mentioned, unions, to be most effective, must be organized over the area of competitive production, and the combination of various local trade unions in one national organization was a means of obtaining this end. Furthermore, realistic trade unionists saw little to be gained for themselves in the use of their superior bargaining power on behalf of the unskilled. Probably the increasing extent to which unskilled labor consisted of immigrants from southern and eastern Europe had some effect on this recession from the ideal of the Knights of Labor. The "one big union" had little effect upon the pay envelope of a skilled worker. To attempt to improve the lot of unskilled labor appeared to be a futile waste of his bargaining strength as a skilled worker. More appealing was the possibility of raising his wages and improving his working conditions by combining with fellow craftsmen.

The American Federation of Labor, formed in 1881, was organized on a basis of autonomy for the national trade union. In contrast to the highly centralized Knights of Labor, the Federation was a loose combination of national trade unions. Its purpose was to unite skilled workers for mutual assistance, financially, educationally, and politically. This organization has con-

tinued active to the present time, and until recently, because of its position as the one large national labor organization, it represented the official views of labor in Congress and elsewhere. The powerful railroad unions, however, have remained outside the Federation, and now the Congress of Industrial Organizations speaks for millions of the previously unorganized workers in industrial plants.

The membership of the American Federation of Labor has fluctuated during different periods of its history. From a little over two hundred thousand members in 1890, to five hundred and fifty thousand in 1900, and then to nearly two million in 1914, is an imposing record of growth. During the First World War the unions that constitute the Federation made their greatest gains. The scarcity of labor brought wage increases; and apparently the government recognized the right of organized labor to participate in political and economic affairs. Under such conditions, the membership rose to over four million. This gain, however, was not permanent, for in the reaction following the Armistice many employers struggled successfully to rid themselves of organizations that they felt had been forced upon them during extraordinary times. By 1926 the membership had fallen to about two and three-quarters million.

The depression of the 1930's severely affected organized labor, and by 1933 the Federation's membership had dropped to two million one hundred thousand. The advent of the New Deal, however, with its protective labor legislation brought a revival in the trade union movement, and in 1937 the membership was over three and a quarter million. Membership increased annually,

reaching approximately six and one-half million in early 1944.

The Congress of Industrial Organizations. Throughout its history the American Federation of Labor sponsored organization chiefly by crafts rather than by industries. Organizing on a craft basis would mean, for example, that after an industry had been organized the members would be divided among the craft unions claiming the right to organize special types of workers. Thus, each skilled worker would belong to his own craft union, whereas in an industrial type of union carpenters, machinists, etc., would all belong to the same union.

Obviously, the craft type of organization was not suitable for large-scale industry and, as a result, the workers in those industries remained unorganized. In 1935, however, under the leadership of John L. Lewis, a group of leaders in the few industrial affiliates of the A. F. of L. formed a committee for industrial organization. Their avowed purpose was to organize the previously unorganized millions in textiles, steel, oil, aluminum, and automobiles. The following year the unions controlled by the leaders of this revolt were expelled from the A. F. of L., and in 1938, after a highly successful organizing campaign, Lewis and his associates formed the Congress of Industrial Organizations.

This new federation of industrial unions has grown rapidly and seems to have taken its place as a permanent organization of labor. With a membership in 1946 of over five million, its affiliates have in their short history obtained collective bargaining contracts in many of the previously unorganized industries. The existence

of two groups of unions often claiming jurisdiction over the same workers has led, of course, to many disputes, but competition between the two opposing groups has resulted in the unionization of many workers never before organized.

The Role of Government. Since the beginning of the New Deal in 1933, the federal government has played an increasingly important part in labor relations. This activity has led to the furtherance of collective bargaining as a method of employer-employee relations, to the establishment of higher standards for America's workers, and to the creation of a broad program of social insurance.

The first step in this series of protective laws was Section 7-A of the National Industrial Recovery Act, which provided that every code of fair competition should contain a guarantee to workers of the right to organize and bargain collectively with representatives of their own choosing and without interference on the part of employers. The court decision voiding the Act put an end to the codes containing this protection of labor, but in 1935, after months of deliberation, Congress passed the National Labor Relations Act. This law, also called the Wagner Act after its senatorial sponsor, guaranteed the right of collective bargaining, defined certain practices of employers as unfair, and established a board to investigate violations. The National Labor Relations Board issues orders, enforceable through the courts, prohibiting employers from interfering in the organizing and bargaining activities of their workers or from engaging in other unfair labor practices.

Since the Supreme Court approved the constitution-

ality of this law, there have been numerous attempts to have it repealed or amended to include prohibitions of unfair labor practices on the part of unions. Thus far the law remains as it was passed in 1935, and under its protection the organization of labor in this country has more than doubled. Furthermore, collective bargaining is becoming more acceptable to management as a method of labor relations, and efforts are increasingly being made to conduct business through union-management co-operation rather than to oppose the unions.

Another protective statute is the Fair Labor Standards Act, passed in 1935, which abolished child labor in interstate industries, decreased the standard work week to forty hours, and increased the minimum wage to forty cents per hour. Wartime increases in wages and prices have, of course, made a minimum wage of forty cents per hour obsolete, and efforts are being made to raise the minimum.

The passage of the Social Security Act in 1935 and its amendment in 1939 brought to the American wage earner some security during periods of unemployment, a small retirement annuity at the age of sixty-five, and benefits to his family in case of his death. American workers, however, still have no insurance to cover the costs and loss of income due to non-industrial accidents and sickness.

The period of the Second World War brought restrictions upon labor never before experienced in this country. Regulations of the War Manpower Commission made shifting from job to job very difficult, and wage rates were regulated by the federal government.

The War Labor Board was given the task not only of enforcing wage regulations but also of arbitrating any labor dispute likely to interfere with the war effort. In practice American labor and industry experienced compulsory arbitration throughout the war period, but with the end of the war all of these restrictions, except some restrictions regarding wages, were rapidly removed.

Political Activity. In contrast with English experience, American labor, under the leadership of the American Federation of Labor, has refrained from forming a labor party. Its political activity has been confined to promoting the election of its political friends and opposing its enemies. The lobbies of the Federation in Congress and state legislatures have constituted important factors in shaping the course of legislation to the advantage of labor. Most of the Federation's policies can be traced to Samuel Gompers, who served as president from 1882, with the exception of one year, until his death in 1924.

Instead of abandoning this traditional political policy, the Congress of Industrial Organizations has adopted it and carried it forward with great vigor through a special Political Action Committee. Created in 1944 to support the Roosevelt campaign, the PAC has remained active both in primary and general elections. Thus far it claims considerable success in influencing the election to Congress of friends of labor and in defeating men and women who oppose measures supported by organized labor. Throughout its brief history, however, CIO leaders have consistently claimed that they do not intend to form a labor party.

C H A P T E R X X I

The Decline of Laissez Faire

MEDIEVAL society has often been characterized as a self-sufficient economy based on production for one's own needs rather than for exchange. In modern society, goods and services continue to be the end of all production; but for the producers, profit has taken the place of sustenance as the immediate and more general end in view.¹ This change in the objective of the system became important when the merchant-capitalist, seeking profit for himself, organized domestic handicraftsmen to produce goods for sale in distant markets. Present-day production and distribution do not differ fundamentally from methods employed in the domestic system, except that the modern system is more complicated and the impersonal character of markets more predominant.

In Chapter XIV it was pointed out that the nineteenth

¹ The term "modern society" as used in this chapter refers to modern society in democratic capitalistic countries. The differences in the economic organizations of countries under other systems are outlined in the concluding volume of this series.

century witnessed the triumph of the doctrine of economic individualism, according to which the economic system would operate automatically without government intervention. It is evident from the developments in modern economic society, described in the immediately preceding chapters, that the expectations of the advocates of economic individualism were not realized, and that it became necessary for the government to exercise increasing social control over the capitalistic system. It is the purpose of this final chapter (1) to examine more closely the manner in which the system of capitalism was supposed to function according to the doctrines of economic individualism under a governmental policy of *laissez faire*; (2) to describe the factors that led to the failure of unregulated capitalism to operate satisfactorily; and (3) to indicate the extent to which government control has become necessary.

CAPITALISM UNDER *Laissez Faire*

A clearer understanding may be obtained of the way in which the system of unregulated capitalism was believed to operate by describing, in the first place, certain fundamental characteristics of the capitalistic system that show how competition was supposed to regulate production and consumption through the mechanism of supply, demand, price, and the activities of profit-seeking enterprise. In the second place, it will be necessary to examine the assumptions underlying

the doctrine of economic individualism in order to determine whether the actual operation of the system has accorded with them.

FUNDAMENTAL CHARACTERISTICS

The fundamental characteristics of capitalism are (1) private property, (2) freedom of contract, (3) profit-seeking enterprise, (4) the price mechanism, and (5) large-scale machine production.² The last characteristic has necessitated the accumulation of capital in amounts too large to be supplied by one individual, thus requiring the establishment of new capitalistic institutions in modern society. As this development has been amply described in the preceding chapters, the present discussion will be limited to the other four characteristics.

Private Property. Private property is the legal right of an individual to own wealth or intangible claims to wealth. It ordinarily includes the right to use those things as the owner sees fit, and to dispose of them even at death to whomsoever the owner pleases. The owner may be any "legal person", including corporations as well as human individuals. These rights are not absolute, even under a regime of *laissez faire*, but are subject to certain duties and taxes as well as to social control to prevent practices regarded as detri-

² While these are fundamental characteristics of the capitalistic system, they are not all necessarily distinguishing features. Any one of them may, in whole or in part, exist also in other systems of social organization. Various critics of capitalism sometimes indicate one and sometimes another of these fundamental characteristics as the distinguishing feature of capitalism. Cf. McCabe, D. A., and Lester, R. A., *Labor and Social Organization*.

mental to the general well-being. As the beginning of the institution of private property is lost in antiquity, its origins are explained by various theories. Suffice it to note here, however, that private property is a fundamental aspect of the present organization of capitalistic society, and is usually assumed to be a basic requirement for the operation and organization of such a society.

Freedom of Contract. Another basic principle of the modern system is freedom of contract, which is a person's right to dispose of his own personal services or his private property as he sees fit, or to make legally binding agreements with respect to the use of those services or property. It implies that two parties, free from coercion on the part of either, may voluntarily make agreements that, once made, are binding on both. If necessary, some social agency may be invoked to enforce the agreement. The law of equity has developed as the sanction for such freedom and for the enforcement of such private contracts. Freedom of contract, however, is not an absolute right, but is subject to social control in the interests of society. For instance, a person cannot contract himself into slavery, though ordinarily a man's right to work is considered as his private property and, therefore, subject to contract.

Profit-Seeking Enterprise. The third important characteristic underlying present-day economic society is that private property may, through the medium of contract, be used to gain a profit. The right to seek profits, like the other two fundamental rights, is far from

absolute, and society often finds it necessary to curb the seekers of gain. Nevertheless, the right to seek profits, within proper limitations, is a close corollary to the institutions of private property and freedom of contract. In fact, they have led logically to the pursuit of profits through private enterprise.

Under the system of free private enterprise, any individual or corporation may enter any business, within the limits set by law, in which there is a prospect of obtaining a profit. It is the hope of profits that serves as the motivating force for economic activity, attracting enterprisers to those lines of business that, at the moment, afford the greatest promise of profits. Other potential producers also have this freedom of enterprise. When they believe that price, in comparison with costs, is high enough to afford a profit, they, too, may enter the business in competition with those already in the field. If, on the other hand, costs rise relative to prices, profits fall, and business enterprises tend to decrease production, or shift production from that commodity to another. Prices and profits are signals that tell business men when to go ahead and when to stop. Where profits are high, numerous producers are attracted, and greater production tends to lower prices and profits, until it is no longer especially profitable to enter that field.

The Price Mechanism. The capitalistic system under *laissez faire* is not a "planned economy", if by that is meant the existence of some authority charged with the supervision of economic activity, and authorized to determine how much of each article shall be pro-

duced, how goods shall be used, how workers shall be paid, and when new methods shall be adopted. Instead, as pointed out above, prices and profits are signals that direct business men in the production of goods and services. Prices are also signals that tell the consumer when, within the limits allowed by his income, to increase or decrease his consumption of goods and services. In this sense, therefore, prices regulate production and consumption in the economic system.

The operation of the modern economic system involves the impersonal production and distribution of goods and services to meet the daily demands of consumers who, for the most part, have little contact with the production of the things they buy. The adjustment of supply and demand is achieved principally through the operation of impersonal market forces. Millions of pounds of butter, for example, are sold annually in any one of a number of large cities. The consumer can go to a retail store and purchase one pound or ten without giving advance notice of his intention. The next consumer expects the same privilege; and so it is in every store in the city. In normal times a consumer rarely finds that butter is unavailable, although he may be disappointed in the prevailing price. The level of price serves to restrict the purchases to whatever quantity is available at the time; for, if the demand for butter is larger than the estimates of producers, or if conditions of production have changed so that an unusually small supply relative to the ordinary volume of purchases is available, the price will be bid up, and vice versa. The maintenance of a con-

tinuous movement of butter from the butter-producing sections to consuming centers to meet the demands of the consumers depends upon the closely correlated activities of producers and distributors. All of these necessary activities are embraced in the operation of the price mechanism, with profit as the chief incentive and guide.

For example, if the daily purchases of butter by consumers were to rise, while the quantities regularly brought to market remained the same, those who had butter on hand would tend to raise the price to the consumer. This rise in the price would have a double effect. It would, first of all, restrict the quantity of butter purchased, since fewer people would pay the increased price or buy as much butter as they would if the price were lower. At the same time, it would stimulate producers to send additional butter to that market. Unless the costs of producing butter increased in proportion, the rise in the price of butter would increase the profits of butter producers; this would encourage them to make more butter, using less cream for other purposes and more in the production of butter. In addition, some producers who might not have been making any butter, because the former price was not sufficiently high to make butter production profitable, would now start producing it. The net result would be that the relative scarcity of butter that caused the rise in price would tend to be corrected by an increased movement of butter to the market.

On the other hand, if the new supplies of butter coming to the market should become too large relative

to the quantity demanded at prevailing prices, a fall in price would result. This would mean that some producers, who at the higher price were able to make a profit, would no longer find the production of butter as attractive as some other form of economic activity, and by abandoning the production of butter, they would tend to bring about once more an adjustment of the supply of butter to the demand for it at a profitable price.

Whether commodities are produced, and prices are determined, under a high degree of competition or under monopolistic conditions, the volume of production and the level of price reflect the forces of demand and supply. Indeed, whether a single producer is operating under conditions of keen competition, or enjoys some monopolistic advantage, he will attempt to adjust his production to demand and price so as to obtain the largest net gain. Butter production is a good example of a commodity that is likely in this country to be distributed under competitive conditions.

Whatever the conditions surrounding the production and marketing of goods, price serves in the capitalistic system as the guide both to production and consumption; and it is important to note two related aspects of its operation. In the first place, changes in price affect production and distribution through the influence that such changes have on the profits of private enterprisers. In the second place, changes in price affect the behavior of consumers within the limits set by their incomes. It is apparent from this discussion that economic relationships bind together the modern economic

mechanism in a specialized system of production, resulting in a high degree of interdependence. It is also apparent that, although planning in the sense of centralized determination of economic programs does not exist under such a system, individual producers, in undertaking economic activities, are constantly attempting to gauge the forces of supply and demand. What planning is done is that of individual profit-seeking enterprisers.

ASSUMPTIONS OF ECONOMIC INDIVIDUALISM

Fundamentally, the assumptions of economic individualism may be resolved into the proposition that this planning on the part of individual profit-seeking enterprisers resulted in the most effective system of production and consumption for society as a whole. It will be recalled that when the reaction from mercantilism occurred at the end of the eighteenth century, the new doctrine of unrestrained individualism or free private enterprise was seized upon as the ultimate basis of economic life. It was assumed that free private enterprise, if allowed to function without interference on the part of government, would cause the system to operate smoothly as if guided by an "invisible hand."

This belief that unregulated competition would furnish society its goods and services at the lowest possible cost was based upon several assumptions, either consciously or unconsciously made by the economic individualists. Among these assumptions, three were of most importance: that the individual knows his own

self-interest better than anyone else, including the government, can know it, and that he follows it; that the pursuit of his own interest by the individual also promotes the public interest; and that competition furnishes its own restraints. From these assumptions was deduced the argument that any interference with the operation of so-called natural economic laws not only would fail to benefit society, but would likely be injurious.

As the individual consumer was thought to know his own best interest, he was supposed to know where to buy the cheapest and best products, or to depend upon a reputable retailer who would act for the consumer's best interest. Furthermore, knowing these facts, he was expected to follow his financial self-interest. Thus, he would always trade with producers who charged the lowest price, thereby forcing all other producers to meet the least expensive price of the presumably more efficient producer. Accordingly, producers also were expected to know and follow their own self-interest, by producing as cheaply as possible so as to sell at the lowest price in order to attract customers; and that was presumed to be the only way in which he could attract customers to him. Consequently, by following individual self-interest, the welfare of society would also be promoted.³

³ In this connection, for example, Adam Smith declared that "Every individual is continuously exerting himself to find out the most advantageous employment for whatever capital he can command. It is his own advantage, indeed, and not that of society, which he has in view. But the study of his own advantage naturally, or rather necessarily, leads him to prefer that employment which is most advantageous to the society." *Wealth of Nations*, Everyman's Edition, Vol. I, p. 398

Competition was thought to furnish its own restraints, because, though each individual was free to use his private property as he chose, nevertheless if he used his freedom and property to the injury of another, he would be discriminated against in the market. Thus, he would be deterred from anti-social acts, and would produce and sell as cheaply as possible. Otherwise, as there was freedom of access to the market, competitors would soon drive him out of business. Moreover, because equality of bargaining power among free individuals was assumed, it would be impossible to take advantage of another in buying or selling goods and services. Consequently, from the free bids of buyers and sellers a market price would arise that would cause goods and services to be produced, distributed, and consumed in the most equitable and satisfactory manner for all.

FAILURE OF UNREGULATED CAPITALISM

The doctrines of *laissez faire* and unregulated competition had scarcely been incorporated in the public policy of England before it became clearly evident that economic individualism alone would not function as prophesied, and that legislation was necessary to protect various groups who otherwise would not be properly safeguarded. After the first of the English factory laws, pitifully inadequate though it was in limiting child labor, was placed upon the statute books,

more and more regulatory measures were passed, both in England and the United States, as the inadequacy of unregulated competition became more apparent. Nevertheless, the prevailing attitude continued to be that, in general, the policy of government should be one of *laissez faire*, and these modifications were regarded merely as essential exceptions to cover special conditions. In a sense, they proved the rule that unregulated competition would serve as the best guide to economic activity.

Similarly, in the United States, during the nineteenth century, essential exceptions were made to the *laissez-faire* policy. During the first half of the nineteenth century practically all of the relationships of federal and state governments with business involved government assistance and co-operation in the task of developing the new country. Such measures included the early tariffs to protect the infant industries of the country; the active participation in projects for internal improvements, such as the construction of roads, canals, and railroads; the encouragement of banks; and the policy of stimulating the settlement of the West through sales of public land at low prices. In the latter half of last century, however, government agencies assumed a more active role in economic life. The federal government expanded its activities in behalf of agricultural developments, exemplified in the establishment of the land-grant colleges and the beginning of agricultural research; it subjected banking to more stringent control; it began the regulation of railroads; and it initiated some control over large industrial enterprise. At the

same time, the states began to assert more strongly their power to regulate certain phases of private business activity in the enactment of factory legislation and similar measures.

During that period, however, economic individualism was the dominant philosophy, and *laissez faire* was considered to be the prevailing governmental policy, with exceptions made only where they were clearly necessary for the social welfare. During the present century, on the other hand, so many "exceptions" have been made to the policy as to constitute a manifest departure from *laissez faire* and a refutation of the philosophy of economic individualism. Indeed, the twentieth century has witnessed a vast extension of government activities. Railroads, public utilities, and communication agencies are far more rigorously regulated; industry is subject to more detailed supervision; both commercial and investment banking are closely controlled; agriculture has been aided more directly than heretofore; government ownership has become an issue in several fields; labor conditions have been the object of regulatory measures; and a large number of functions have been undertaken that either restrain or assist a multitude of economic activities.

Many reasons may be advanced in explanation of this tendency toward enlarged social control. It may be argued that regulation is necessary to protect one economic group from another; that the rise of monopolistic enterprise necessitates control; that the increasing complexity of our economic system requires the exercise of a greater degree of centralized super-

vision; that the delicate adjustment of the system exposes it to frequent disequilibria and collapse, making necessary government intervention. However, all these reasons are connected with the growing conviction that there are two fundamental weaknesses in unregulated capitalism. In the first place, it is clearly evident that actual conditions are contrary to the assumptions of the philosophy of economic individualism. In the second place, even were the doctrine not faulty, there are unfortunate conditions arising from the inherent operation of the system.

CONDITIONS CONTRARY TO ASSUMPTIONS OF ECONOMIC INDIVIDUALISM

As economic institutions developed under the *laissez-faire* policy during the nineteenth century, it became apparent that perfect competitive conditions did not always exist, that a number of industries were naturally monopolistic and not adapted to competitive operation, and that in many instances uncontrolled competition led to artificial monopolies.

Imperfect Competition. At the present time, there are doubtless many commodities produced and sold under conditions conforming, within reasonable limits, to the assumptions of perfect competition. For the most part, however, it may be said that the assumptions underlying competition are only partially realized; that the market is an imperfect one; and that competition, therefore, functions as an imperfect regulator of the system of production and distribution as a whole. It frequently happens that the consumer does

not know his own best interest, and sometimes, though knowing it, he may for various reasons fail to follow it. In making many purchases he is without adequate knowledge of the quality of the goods he purchases; and though he may be protected in some instances by the reputation of the seller, in many others he does not enjoy such protection.

Moreover, the best interest of a particular producer is not always to the best interest of society. If one can make a larger profit by exploiting labor, it is difficult in some cases for labor to discriminate against him or for the consumer to know that he is obtaining a shirt cheaper because it was made by sweatshop labor. Indeed, the consumer seldom has adequate information concerning labor conditions or sanitary conditions to aid him in making intelligent and socially justified choices, assuming that he would make them if adequately informed.

Though freedom of producers to enter a market exists in many lines, there is little freedom in others. Often a newcomer is met by unfair competitive practices and price-cutting by existing concerns with the object of driving him out before he becomes established. At the same time, equality of bargaining between the buyer and seller of labor services is frequently nonexistent. A worker without resources save his own labor, and faced with starvation, hardly occupies a bargaining position as strong as that of the employer who cares little whether he hires that man or another.

Thus, although the assumptions of competition may be exemplified in many lines, there are, nevertheless, numerous situations in which they are not fulfilled. Consequently, the belief in the efficacy of unregulated competition is not so widely held today, and it is more generally conceded that some measure of social control, either by substituting supervision for competition or by supplementing competition with regulation, is frequently necessary to safeguard the interests of society.

Natural Monopolies. In some industries, competition results in the wasteful utilization of resources. In small cities, for example, as many as a dozen milk drivers arouse the light sleeper in the early hours of the morning, because the dozen families living on the street choose to obtain milk from twelve different dairies. On the other hand, except in a few places, only one telephone need be installed to obtain service anywhere in the city or in the world. In the instance of milk, competition is relied upon to maintain a low price. In the telephone industry, competition as a regulator is admittedly impossible, and a monopoly furnishes the services, subject to public regulation.

Such monopolies are often termed "natural monopolies." In general, a natural monopoly exists wherever a duplication of service would be extremely inconvenient, and where, at the same time, high fixed costs must be incurred before any service can be rendered. In such cases, competition may not only be cutthroat, eventually bringing about the ruin of the competent

and incompetent alike, but it may lead to inferior rather than more efficient service. Railroads and electric utilities are both industries of this type.

Artificial Monopolies. In other industries, competition fails as a regulator of price because the owners feel that a higher profit can be obtained by limiting the supply and thus artificially raising the price, and they find that conditions are such that they can successfully follow such a policy. If several producers, controlling a large portion of the supply, agree to form such a monopolistic combination, free private enterprise no longer exists as a regulator. Such combinations were formed with great rapidity during the latter part of the nineteenth century, and are widely prevalent today in spite of attempts by government to prevent them.

CONDITIONS ARISING FROM OPERATION OF THE SYSTEM

In addition to the defects in the capitalistic system that have resulted from the failure of the assumptions of economic individualism to be realized, there have also appeared certain weaknesses that seem unavoidable in the operation of a system guided only by individual choices. The most important of these are the wide fluctuations that occur in business activity, the wastes resulting from the risks of enterprise, and the insecurity existing in industrial employment.

Cyclical Fluctuations. A conspicuous feature in the operation of unregulated capitalism has been the recurrence of severe fluctuations in the volume of busi-

ness activity, and consequently in employment, prices, and profits. To be sure, earlier periods of economic history were also marked by times of scarcity and hardships of which perhaps one has little conception today. Those adversities, however, were closely connected with natural calamities or with the incidence of destructive wars. Modern industrial fluctuations, on the other hand, show no such close connection with the forces of nature, but, by their regularity of recurrence, suggest that they spring from causes within the economic system itself.

Indeed, a close examination of these business fluctuations reveals varying degrees of intensity and suggests a comparison with the ocean, which, even when calm, has mild waves, and which at irregular intervals is swept by storms that create waves of extraordinary height and depth. Economic society, likewise, is never entirely stable. When some industries are advancing, others, because of various factors, are making little if any progress. Though many industries enjoy a sustained year-round business, many others are faced with seasonal changes in demand. In addition, observers have noted that at fairly regular intervals (averaging about three and a half to four years) mild economic storms occur which create rhythmical fluctuations in business activity. Occasionally (from eight to twelve years) these storms are more severe than usual, and produce much damage and misfortune; while at long intervals an economic hurricane occurs, bringing disaster in its wake.

In fact, it is probable that the recurrence of severe

industrial fluctuations in the course of the "business cycle" is the major problem of the contemporary economic system about which cluster most other social and economic problems. Some critics of the system have argued that these cycles, being inherent in the modern economic system, will become worse and worse until eventually there will come a crisis that will largely obliterate the present system and prepare the way for the formation of a new society built upon different principles. Other persons maintain, however, that business cycles are the product of unregulated capitalism, and that an intelligent and inclusive policy of government control of capitalism could mitigate their worst manifestations.

Risks of Enterprise. For the most part, the risks of modern economic society are assumed by the enterpriser, because in producing goods for sale in the market he must frequently make heavy expenditures for equipment, raw materials, and labor, long before the finished product can be sold. In making these expenditures, or in assuming obligations with respect to them, the producer has no guide save his estimate of the probable course of the demand for his product in the future. If he correctly estimates the future situation, he may gain; if not, he may lose. Thus, risks are unavoidable in a society in which goods are produced for a market rather than for individual order.

The medieval guildsman ordinarily produced a pair of shoes, a sword, or any other commodity only when it was ordered by a customer. In his spare time, of course, he might produce a small stock of goods, but

that was for his own customers rather than for some distant market. With the appearance of the merchant-capitalist, production was undertaken less and less for prior order, and increasingly for a market distant in place and time. As this system became more complicated and interdependent, production became even more risky. Furthermore, the amount of capital risked in large-scale specialized industry is considerably greater than formerly.

The weather, changes in style, shifts in demand, and business cycles are among the factors that create risks in production for a future market. Even with modern knowledge, there seems to be little that can be done to control such variable factors, although some amelioratives may be attempted. It should be possible, for instance, to obtain statistical information that would enable the producer to forecast the future to some extent, even though he cannot control it. But when a new industry makes its appearance, many similar plants are frequently started, with the result that new supplies may far exceed the demand that encouraged the building of the first plant. When business conditions are good for a short time, dozens of plants expand, apparently unmindful that others are doing likewise; consequently, all the products probably will not be salable at the previously profitable price that prompted the expansion. Under such circumstances, adequate statistical information could probably do much to make the producer's future somewhat less risky.

These risks of production bear heavily upon society as well as upon individual enterprisers. When, acting

without sufficient knowledge, numbers of producers expand at the same time and to a degree in excess of potential demand at a profitable price, an uneconomic allocation of the factors of production results. Furthermore, when mistakes in forecasting cause unemployment of labor and capital, the waste is tremendous, and the social and monetary costs reach staggering proportions. One of the causes of the business cycle itself is this assumption of future obligations involving costs and market conditions that cannot be controlled.

Insecurity of Employment. Today it may seem paradoxical that early in the nineteenth century the increase of specialization and broadening of markets was hopefully regarded as a means of increasing the stability of economic activity and the security of employment for craftsmen. Contemporary comment pointed to the fact that the production for distant markets would introduce a diversification that would offset periodic diminution in local demand. In addition, it was thought that greater stability would arise from the fact that the local manufacturer could, with the broader market, operate continuously instead of having to "wait" for orders. Modern economic society has come to the unhappy conclusion that the specialization and interdependence involved in the occupational and geographical division of labor is one of the most important reasons for the severity of modern depressions and the great insecurity of employment. When maladjustment brings a cessation of demand in one locality or for the products of one occupation, there seems to be a visible tendency for a chain of unem-

ployment to follow. Unemployment in one place means a cessation of demand for products that are being produced elsewhere.

Moreover, each progressive application of new technological methods or the introduction of improved machinery has usually occurred in such a manner as to jeopardize the security of employment. When such improvements in production methods are rapidly effected, as frequently happens, skilled craftsmen who have spent years in a particular occupation are ordinarily displaced. This is called technological unemployment, and it is clearly the result of progress in a dynamic economy. If the economy is also expanding with great rapidity, as it was during the latter half of the nineteenth century, this unemployment may be fairly completely absorbed in other activities, though frequently less desirable ones from the viewpoint of the individual worker. In a less rapidly expanding community, however, technological unemployment is likely to constitute an ever-present problem, bringing hardship particularly to middle-aged or older workers, who find it more difficult to obtain employment in newer crafts.

Insecurity of employment arises, however, not only because of the cyclical behavior of the system and the introduction of technological improvements, but also as a consequence of the personal hazards to individuals working under the modern machine regime. The hazards of accident and industrial disease are frequently present, regardless of any care that the worker himself may exercise in his own behalf. These hazards

constitute personal risks to the workers that have far more serious consequences to him than the monetary risks of enterprise have to the employer. Moreover, with modern industrial technique requiring agility of muscle and mind, there has arisen, to a more marked extent than ever before, the hazard of dependent old age. Workers, under conditions of mass production, are now frequently considered too old to work at an age that, under simpler handicraft production, would have seen them reaching the peak of their skill and earning power.

DEVELOPMENT OF SOCIAL CONTROL

EFFORTS AT SELF-REGULATION

As it became increasingly apparent that uncontrolled competition did not always operate as a satisfactory regulator of economic activity, there appeared many instances of voluntary action by producers to impose regulation upon themselves so as to correct the abuses of competition and to overcome some of the risks inherent in separate individualistic planning. Thus, organizations have been formed in many fields for the purpose of raising competitive standards and of placing restrictions upon unethical practices. The activities of stock exchanges, which are concerned primarily with supervising the practices of their members, constitute an outstanding example of this type of control; and in recent decades the trade associations of manufacturers and similar groups have devoted much atten-

tion to the improvement of competitive conditions in their respective industries. In addition, restrictions are sometimes imposed upon one industry by another, such as the strict regulations that fire underwriters require building contractors to observe in constructing a building.

Indeed, during the last half century, there has been a steady tendency toward the substitution of group action in place of the highly individualistic action that was assumed in the doctrine underlying *laissez-faire* capitalism. As a result, those groups that could organize successfully, or become articulate through their influence upon legislative bodies, could protect themselves from others, whereas other classes that were unable to co-operate usually suffered. Consuming groups in general fall within this latter category. Except for occasional success in co-operative action, agricultural classes also have been unable, until very recent years, to combine for effective group action. Nor has labor until recently been able to protect itself; now, however, in many industries, strong unions have been organized to improve labor's bargaining position and secure greater competitive equality.

While such self-regulation had the effect of solving problems for the co-operating individuals, it also had the effect in some instances, notably in the creation of artificial monopolies, of throwing into sharp relief the conflict between the interests of particular groups and the interests of economic society. In other fields, the efforts devoted to self-regulation have not been sufficiently widespread or effective to make the competi-

tive system operate in the harmonious fashion desirable for general well-being. To an increasing extent, therefore, government has intervened to promote the public welfare.

GOVERNMENT INTERVENTION

Because of the failure of unregulated competition to function properly in modern economic society, various types of government intervention have been developed to meet the different needs. The four most important types of government action are the supervision of competition, the regulation of monopoly, the operation of specific industries under government ownership, and the attempt to remedy the defects inherent in unregulated capitalism.

Supervision of Competition. The principal occasion for social supervision of competition (or the substitution of government control for unregulated competition) arises out of the divergence of actual conditions in industry from those assumed by the proponents of individualism. Some government activities represent an attempt to protect the individual and help him to know his own interest, as, for example, through the Pure Food and Drug Act and the Securities Act. But of most importance are the efforts of the government to maintain the conditions of freedom in the competitive market and to furnish legal restraints to economic aggression when the self-restraining forces of competition fail to be effective. This was the purpose of the Federal Trade Commission Act of 1914, which forbade unfair competitive practices and sought

to substitute a controlled competition for unregulated competition. It prohibited such tactics as the misbranding of products, spying on a competitor's trade secrets, misrepresenting products, discriminating in prices, and the like. The prevalence of such practices reacted adversely in many instances, both upon the consumer and the honest competitor, and was generally regarded as contrary to the general social interest. Despite the efforts of the Federal Trade Commission, complaints of unfair competitive practices are still widespread in many industries.

In an effort to preserve competition as the general regulator of industry, the government has sought, with only moderate success, to prevent the formation of artificial monopolies. The Sherman Anti-Trust Act of 1890 was the first federal legislation for this purpose, and later the Federal Trade Commission was authorized to investigate any practice that might indicate the existence of a monopoly or a collusion on prices. The purpose of the legislation was to break up potential or actual monopolies, which seemed to spring like mushrooms from the soil of unregulated competition.

Regulation of Monopoly. Under certain conditions, as already indicated, society is best served by a single firm rather than by two or more competing concerns, notably in such industries as railroad transportation, electric utilities, and telephone service. In these industries it has been the policy to attempt to regulate the prices charged by the monopoly. Presumably the price will be fixed high enough to insure a profit sufficient to keep the firm in business, but not as high as the

monopolist would charge if he were free to select the price that would yield him the maximum gain. Such a policy of regulating private monopolies is an attempt by the government, upon the failure of competition, to see that goods and services are provided for the public at the lowest possible prices.

The policy was applied first to the railroads in the latter part of last century, when it became evident that in the railroad industry unregulated competition was not only injurious to the roads themselves but also failed to safeguard the interests of the general public. The program of control has been strengthened in this century and has been extended to include many other such agencies. Not only the federal government, but the states as well have exercised authority over naturally monopolistic industries. Although banks are not altogether in the same category, nevertheless the government has regulated them with increasing severity since an early date, to protect both the public and the banks themselves from injudicious actions that might result from unregulated competition.

Government Ownership. In the event that private enterprise, operating under either supervised competition or regulated monopoly, fails to provide goods and services to the public at reasonable prices, society, acting through its government, may undertake to own and operate industry for the benefit of the entire community without regard to profit. The service may be one that, for the social good, should be available to everyone at low cost, but, if operated by private enterprise for profit, would not be available to everyone. Such an

activity is the postal service, which provides mail service to outlying districts that would not be served by private enterprise. Municipal public utilities, many bridges and tunnels, and even public education, are other examples of social ownership. Whatever the reason for the operation of industry by society, government ownership is an increasingly important method for furnishing goods and services that free private enterprise, operating under competition for private profit, does not satisfactorily provide.

Remedy Defects Inherent in Unregulated Capitalism. During recent years there has been a distinct development of governmental policy in this country towards repairing the capitalistic system, not only by attempting to make effective the assumptions underlying free private enterprise as indicated above, but also by mitigating the effects of some of the conditions inherent in the operation of capitalism. This has been especially apparent in two types of government activity: in the increasing efforts to reduce the severity of cyclical fluctuations, and in the enactment of social legislation to minimize the insecurity of employment.

The progressive centralization of control over the system of banking and credit is being utilized by the government to regulate the supply of money and credit so as to lessen the extremes of inflation and deflation. Private activities in the financial markets are increasingly responsive to, and dependent upon, governmental policies. Furthermore, the federal government is assuming enlarged responsibility for undertaking measures to stimulate recovery from business depressions. In general,

the opinion is widely held that a proper function of government is the establishment of greater stability in business activity.

Although private enterprise has developed varied insurance companies to aid society in meeting many types of insurable risks, it became apparent that such undertakings could not cover the risks of unemployment, of industrial disease and accident, and of superannuation. Protection against such hazards also appeared to be impossible of achievement by means of self-imposed cooperation among employees or employers. Consequently during recent years, there has been a rapid development of social insurance, whereby the government compels both employers and employees to make provision for protecting workers against the industrial hazards of accidents, unemployment, and old age. Moreover, to assist in establishing a greater equality of bargaining power between industrial employers and employees, the government has also facilitated materially the formation of labor unions for collective bargaining between the two groups.

CONCLUSION

In summary, the decline of economic individualism, operating under uncontrolled competitive conditions, appears to have passed through three stages since its general acceptance over a hundred years ago. At first, with the government following a *laissez-faire* policy of non-interference in economic activities, unrestrained competition led to combination, collusion, and monopoly in

many fields; numerous abuses developed, and economic individualism seemed to be self-destructive.

There still existed, however, a widespread faith in the efficacy of competition as an impersonal regulator of the economic system. Consequently, a public demand arose during the latter part of the nineteenth century for the government to abandon its policy of *laissez faire* and exercise sufficient control over economic life to eliminate the abuses of unregulated capitalism, make effective the assumptions underlying economic individualism, and enforce competition within the capitalistic system. This program of reform marked the second stage in the decline of economic individualism.

Finally, as a consequence of the vast size of economic enterprises, the growing concentration of control, the increasing severity of business fluctuations, and the complexity and interdependence of the economic system, there has developed in recent years a prevalent belief that competition, even though controlled by government, is an unsatisfactory regulator of economic forces in many lines. Industrialists seek instead a system that will permit them to produce goods and services for society by co-operating, rather than by competing, with each other. In the place of individual freedom of enterprise within the competitive price mechanism as the guiding force of the economic system, they would substitute prices administered through combined action by producers, with or without government control. On the other hand, the masses of wage earners likewise appear willing to sacrifice certain of their economic and politi-

cal liberties in the hope of obtaining, through a controlled economic system, a greater promise of economic security amid the uncertain hazards of present-day life. Whatever the motives, there is unquestionably at present a strong movement among many classes away from a reliance upon competition as the economic arbiter and toward greater dependence on social control. Contemporary conditions indicate for the future a continued recession from economic individualism and *laissez faire*.

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